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JULY-AUGUST, 1950

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Governor of Louisiana

ERNEST S. CLEMENTS
Commissioner

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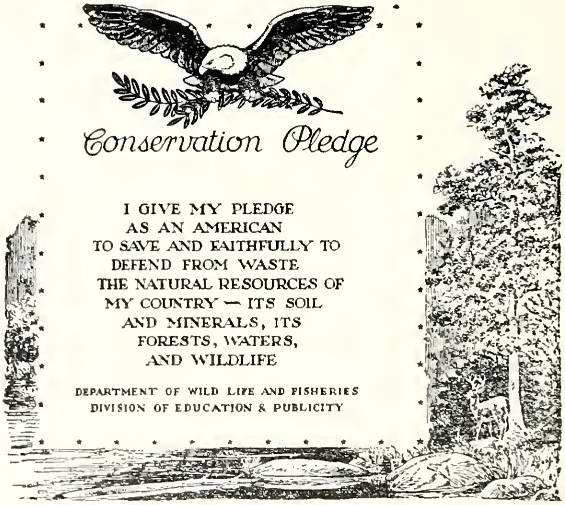

Conservation Pledge

I GIVE MY PLEDGE
AS AN AMERICAN
TO SAVE AND FAITHFULLY TO
DEFEND FROM WASTE
THE NATURAL RESOURCES OF
MY COUNTRY — ITS SOIL
AND MINERALS, ITS
FORESTS, WATERS,
AND WILDLIFE

DEPARTMENT OF WILD LIFE AND FISHERIES
DIVISION OF EDUCATION & PUBLICITY

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EDITORIAL

JULY-AUGUST, 1950

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COVER

Here is a true conservationist. While other boys thoughtlessly destroy game, fish and birdlife, this young native of Pecan Island, with his dog, and armed with a stout club, makes war on garfish in his native waters, thereby ridding his fishing spots of predators, and at the same time finding an outlet for his youthful enthusiasm for outdoor activity. He is shown here with five big gars, which he has clubbed and dragged onto land.

By Ernest S. Clements

Commissioner of Wild Life and Fisheries
of Louisiana

WHO OWNS the natural resources of Louisiana?

It seems to me the correct answer to that question, deeply impressed on the minds of every man, woman and child in this state, would go a long way toward genuine conservation of our fish and game, and complete observance of our conservation laws.

The answer, of course, is that the state of Louisiana owns its natural resources, and that makes you, as a resident of Louisiana, a part owner in its fish, game, wild fur bearing animals and fowls that have not been reduced or domesticated to private ownership. So you see, protection of our fish and game is as much your obligation as that of any appointed conservation official or delegated game warden.

When the first colonists settled in Louisiana this territory was in fact a natural paradise. There was a greater wealth of fish and game here than in any other part of this new world. Our Divine Creator, who in His great wisdom balances all things, gave to Louisiana fabulous natural wealth to compensate for its great wastes of marshland, flooded areas and unfertile hills. But in the two and a half centuries since the first white men came to our shores, man has laid waste in such profligate dissipation that our wildlife has shrunk to an alarming scarcity.

In simple words we have been robbing ourselves or complacently permitting our neighbors to rob us, of our natural fish and game resources.

The theory of public ownership of fish and game through the state in its sovereign capacity is vested in the Napoleonic code, the prevailing laws of this state, thus our natural resources are a trust for the people of this state . . . . An endowment that YOU own, and consequently are obligated to protect and preserve.

If you were carrying a sack of wheat that you owned, and became aware that there was a hole in the sack and your wheat was spilling out, would you continue on blithely, dribbling away your posession, or would you plug up the torn sack and protect your wheat?

If you would only exercise the same pride in ownership of your fish and game, it wouldn't be long before restocking programs and law enforcement appropriations would be unnecessary. Restocking of our fish and game and enforcement of conservation laws are both highly expensive operations and you pay the bill. In fact you pay it twice. You pay when you let violators rob you of the game you own. And you pay again when the state attempts to replace it.

If you saw a man robbing your neighbor's house, or your own, you, as a law abiding citizen, would report it immediately. In fact you might apprehend the thief yourself, which as a good citizen you have a perfect right to do. If you could be made to realize that game and fish law violators were robbing you and your neighbor just as surely as the house-breaker, what a great forward step toward preservation of our natural resources we would take.

So, when some one asks: "whose game is it?" look him in the eye fearlessly and say:

"It's mine, and I'm going to help protect it."

DO YOU LIKE PICTURES?

So do we! Hunting pictures . . . fishing pictures . . . pictures of the game you bagged . . . pictures of your dogs . . . pictures of yourself or your friends on a hunt or fishing trip . . . in fact any kind of good picture that has a bearing on field or stream sports.

Mail them to EDITOR, LOUISIANA CONSERVATIONIST, 126 Civil Courts Bldg., New Orleans, and we'll return 'em to you as soon as we've been able to use them.

NATURE IS GREATEST OYSTER CULTURIST

A closeup of the new camp, boathouse and harvester, the latter being used as a self-propelled barge while the new Bay Gardene camp was being built.

By James N. McConnell

Director, Oyster and Water Bottoms, Department of Wild Life and Fisheries

DURING the past ten to fifteen years undue oyster mortalities have been occurring in our coastal waters and Ernest S. Clements, Commissioner of the department of Wild Life and Fisheries, has given his wholehearted and unqualified support to the effort presently being made to determine the causes of this mortality and to rectify it.

All of our oyster fishermen from Plaquemines, Jefferson and Lafourche Parishes, west of the Mississippi river, formerly transplanted the majority of their small seed oysters during the months of February March and April, and would not harvest these oysters until they had been transplanted for a period of eighteen months or longer. This required their remaining on the new bed two summers after planting. At that time, because of low mortalities and the use of small oysters for seed, fishermen could reasonably expect to market, at the end of the period, from one and a half to three barrels of good oysters for each barrel of seed oysters planted, depending upon the location planted. In some few isolated cases as many as four for one have been harvested.

For the past several years however it has become necessary for fishermen in these same areas to transplant their seed oysters from August 15 to December 1 of each year and harvest these oysters before summer, or if they remained on the bottoms during all the summer months mortalities ranging from 35 to as high as 95 per cent have occurred. Due to this condition, the fisherman today, in looking for seed oysters, attempts to find the largest oysters that can be obtained from the natural reefs so that they may be harvested before one summer is passed. The result of this practice places a heavy drain on our natural reef area, as the fisherman, who formerly used only 10 to 20 loads of seed oysters, is now using 80 to 120 loads to meet his requirements.

This condition has seriously affected our steam canning plants in Plaquemines and Jefferson Parishes that formerly obtained most of their supply from the natural reefs. Since oysters on these reefs are in their best condition for steam canning from January 1 to April 30, it is to the best interests of the canning plants that operations do not commence before January 1 of any year. It can readily be seen what happens to the canners when they open on January 1, after the seed oystermen have been searching the reefs for more than three months for the largest oysters available in quantities.

The only bright spot in the above picture is that for the past two years the fishermen, who take these seed oysters have selling the great majority of their catch to the canning plants. These transplanted oysters seem to grow and fatten rapidly and when packed by canners in March and April, yield from 35 to 43 five-ounce cans to the barrel, whereas the same oysters left alone on the natural reefs only yield, when packed during March and April, from 18 to 22 five-ounce cans to the barrel.

This change in oyster production did not occur rapidly but over a long period of from 10 to 15 years. It was first noted that oysters could not remain through two summers after transplanting without heavy losses, then later it was found that they could not stand one entire summer after transplanting.

A new machine for removing oysters from the botton was invented by a New Orleans man, Joseph M. Jurisich. This oyster harvester can be made to work for the betterment of oyster beds, for the culture of young oysters, for the seeding of new beds, and for the reclamation of shells, as well as for bringing up good oysters, and it can do all this as fast as 50 men could do the same work in the old time method of tonging oysters.

Mounted on maneuverable barge, which is powered by a Murray and Tregurtha outboard propelling unit that can be raised or lowered to make it usable in deep or shallow water, the harvester is a streamlined unit that brings up oysters, shells, clusters of spat, or whatever else is movable on the bottom of the lake, bayou, lagoon or bay. There is an endless-chain type of conveyor that brings up the oysters as they are fed onto the conveyor by the strong, steel teeth of the rake-like dredge, and there are guard runners on each side of the teeth to prevent gouging or excessively deep digging in the in the oyster beds.

Sturdily constructed and mounted, the harvester was tested on every type of reef and in all sorts of weather and found to be practical and efficient.

After a trial operation for a one-month period, and after consultation with members of the industry, it was decided to purchase the harvester at a cost of $22,400.

From June 1, to December 31 of 1949, approximately 69,219 bushels of oysters were transplanted from over-crowded reefs in Mississippi Sound to depleted areas in Bayou Gregue, Oyster Bay and in Turkey Bayou.

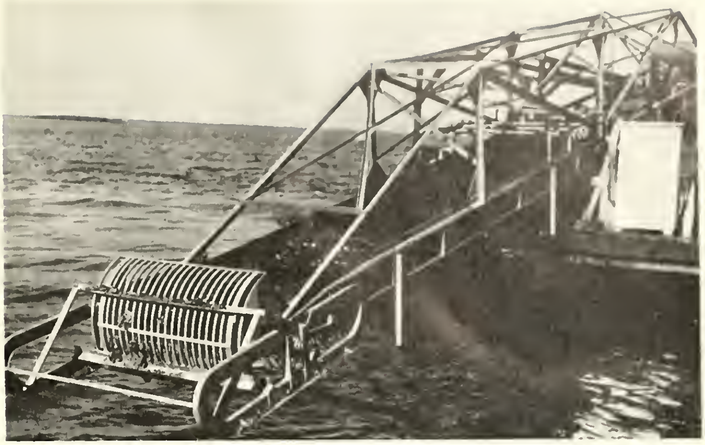
From January 1, to June 1 of 1950, approximately 69,219 bushels of oysters were transplanted in Bay Gardene and 7851 bushels in Grand Pass.

During November of 1959 a new oyster

reservation has been designated in Bay Gardene in Plaquemines Parish, approximately ten miles east of Point a la Hache. A watchman's camp in this area has been almost completed, and the Parish of Plaquemines has completed dredging the necessary slips and channels to facilitate the oyster harvester operations, which will continue in this area until the available area in the Bay Gardene Reresvation has been filled with oysters. The Department will notify the public when these oysters may be taken and will supervise their removal.

Louisiana has enjoyed what seemed to be an unlimited supply of oysters from her comparatively vast acreage of natural oyster reefs. Like many of our natural resources, we have experienced years of decline, which fortunately, in the past, have been followed by years of abundance. Unlike the oysters producing states of the East Coast, our poduction from natural reefs has not shown the steady decline since 1890. Like our eastern neighbors, however, certain of our natural reefs have shown a marked decline in production that is directly traceable to man's rate of harvest. That is, he has removed oysters in excess of the natural reproduction. The natural oysters enemies and parasites are virtually non-existent on the natural reefs of St. Bernard and Terrebonne Parishes, with the exception of occasional conch or snail depredations in the restricted areas of higher salinities. Occasional mass catastrophies have resulted from prolonged periods of low salinities following levee crevasses, or periods of prolonged flood condition of our rivers.

———*Take a boy fishing*———



New Oyster harvester showing scraper head with slides and conveyor.

The natural oyster reefs of Louisiana are very sharply restricted in location to the accessibility of available fresh water from the rivers or bayous. This production from the natural reefs today is derived entirely from the tributary waters as a result of the survival of the more consistent strike. The natural reefs of St. Bernard and Plaquemines (east of the Mississippi River) and of Terrebonne Parish (east of the Atchafalaya Bay) have been self-sustaining during the past years. Historically, these natural reef areas have had their periods of abundance and scarcity of oysters that have followed the pattern of the tributary drainage.

There are three major areas in Louisiana where optimum environmental conditions prevail which result in our vast acreage of natural oyster reefs. These areas are defined as drainage areas which specifically means the basin that serves as a source of fresh water for the oyster communities in the lower salt-water marshes. The rivers and boyous which serve to convey fresh water to the salt marshes, for the mixing with the high saline Gulf of Mexico water, form the particular outlets of the "drainage areas".

The first of these major areas is known in our state as the "Louisiana Marsh". It is a sub-delta marsh which extends from the eastern Loiusiana-Mississippi water boundary to Bayou La Loutre, an old mouth of the Mississippi River. Between these two points is located a prolific natural oyster population. Pearl River is the chief ecological controlling influence on the oyster reefs of this region. The Pearl River drainage basin extends approximately 200 miles north and covers more than 8200 square miles of land within the states of Mississippi and Louisiana. The salinities of Mississippi Sound and of the Louisiana Marsh have been found to positively correlate to the volume discharge of this river.

The natural reefs of this drainage area have been extensively studied. The oysters closest to the mouth of Pearl River (4.5 nautical miles) consist of stunted, clustered, white shell organisms of poor quality. When we progress to the natural reefs ten miles from the mouth we find

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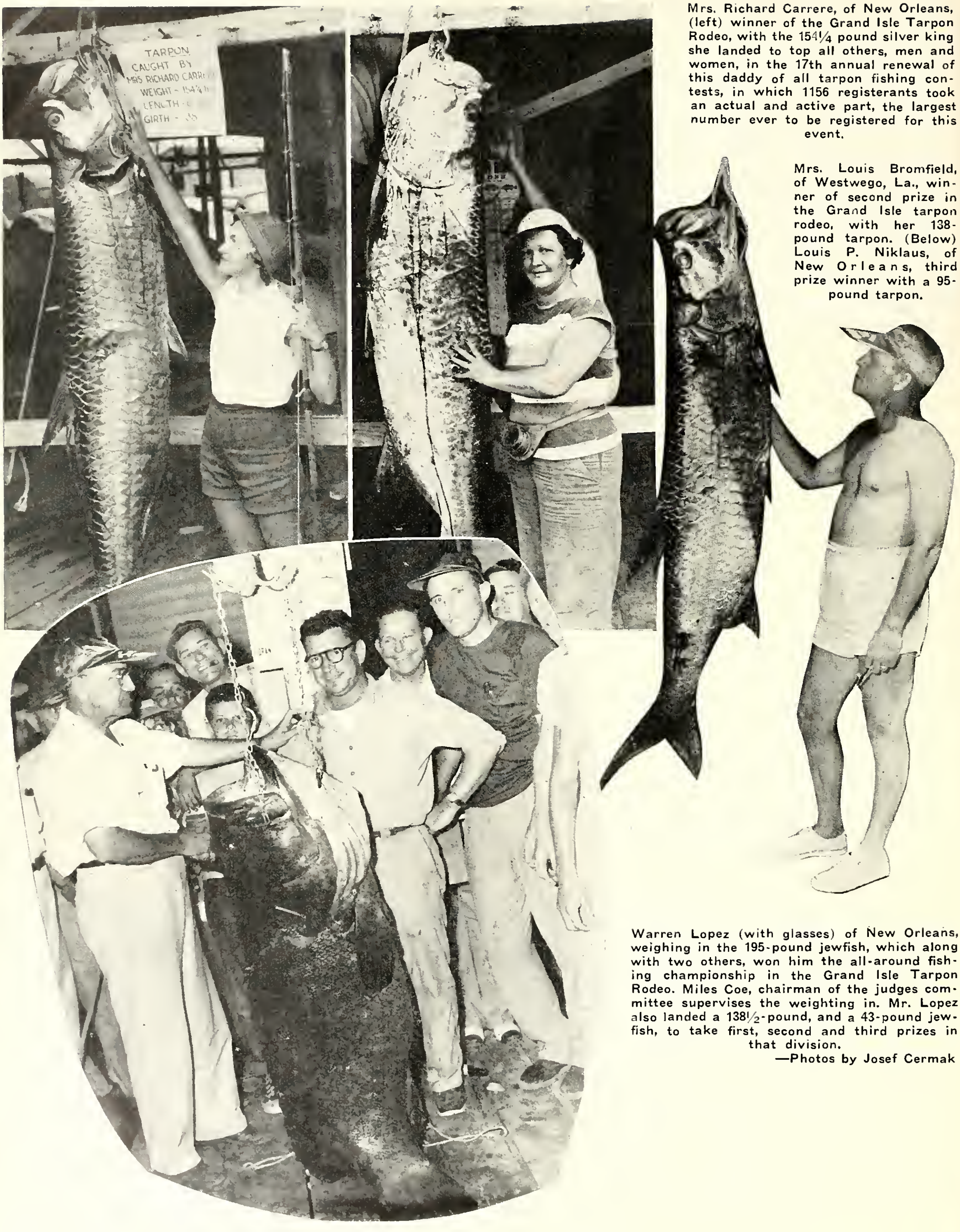
Camp, boathouse and harvester slip with Bay Gardene, where the oyster reefs have been planted, in the background.



Mrs. Richard Carrere, of New Orleans, (left) winner of the Grand Isle Tarpon Rodeo, with the 154¼ pound silver king she landed to top all others, men and women, in the 17th annual renewal of this daddy of all tarpon fishing contests, in which 1156 registerants took an actual and active part, the largest number ever to be registered for this event.

Mrs. Louis Bromfield, of Westwego, La., winner of second prize in the Grand Isle tarpon rodeo, with her 138-pound tarpon. (Below) Louis P. Niklaus, of New Orleans, third prize winner with a 95-pound tarpon.

Warren Lopez (with glasses) of New Orleans, weighing in the 195-pound jewfish, which along with two others, won him the all-around fishing championship in the Grand Isle Tarpon Rodeo. Miles Coe, chairman of the judges committee supervises the weighting in. Mr. Lopez also landed a 138½-pound, and a 43-pound jewfish, to take first, second and third prizes in that division.

—Photos by Josef Cermak

GAME PRESERVES PROVE THAT RESTOCKING PAYS

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By Mel Washburn

(Director, Education and Publicity, Department Wildlife and Fisheries)

Now that the restocking program of the department of Wild Life and Fisheries has been under way in Louisiana for a year and a half, it might be well to see just how things stand on the credit and debit sides of the ledger. There are at present nine game preserves in Louisiana, six of which have been established within the last year and a half, several more are in the process of being established, and all are stocked, or will be stocked, with suitable game and fish before the restocking program of Commissioner Ernest S. Clements is completed.

That this restocking program is destined for success is already an accepted fact, especially in the areas immediately surrounding these game preserves. Undoubtedly the exhaustive study of conditions in each game preserve area before the final establishment of the refuge, is one of the paramount reasons for the excellent results that an inventory of each preserve reveals.

Before negotiations were even started for each game preserve location, a complete survey was made by game management experts of the Department of Wild Life and Fisheries, in conjunction with representatives of the U. S. Department of the Interior, under which the federal Pittman-Robertson fish and wild life services projects are administered. Habitat, food possibilities, protection potentials, and predator populations were given every consideration and members of the predator control unit of the Fish and Game division of the department, were sent into each area to trap out the bobcats, wolves, wild dogs, skunks and other destructive predators, and then after the establishment of each refuge, these trappers were kept constantly on the job.

Biologists and game management experts studied food and cover conditions, cleared and arranged food plots, studied habitat and terrain for hazardous obstacles and even sponsored educational propaganda to acquaint the residents of neighboring tracts with the advantages of having a game preserve in their community.

It is an involded effort, this establishing, restocking and maintaining a game and fish preserve, but it will pay off, and it will pay off in huge dividends if conducted according to plan. It is also the only way in which this state's wild game population can be restored with any degree of certainty.

———*Take a boy fishing*———

During the last year and a half Commissioner Clements has constantly concerned himself with the rehabilitation of Louisiana's game and fish population. He has listened with a sympathetic ear to every plea for quail, wild turkeys, deer, squirrels and fish, but he has been equally as firm in his demands that no game or fish be squandered, merely for the sake of saying restocking had been done, hence the establishment of a record number of game refuges.

What are these game preserves like, how are they managed, and what has happened to the game that has been transplanted there? This is the triple-barreled question that we hear daily. And there is another question, too; what good can come of this restocking? A tour of each game refuge answers all these questions, and we have now begun a series of such tours.

Having selected the Livingston game preserve for our first visit we found amazing results despite the fact that no restocking was done on that refuge before last February.

The Livingston preserve is in the Bayou Barbary area of Livingston parish, and is bounded by the Ticfaw river on the North; the town of Clio on the East; the Amite river on the South, and Bayou Barbary on the West. It is an 11,000-acre tract of timberland, streams, beech bay ridges, and enough open terrain to be of the most excellent habitat for wild turkeys and quail, as well as deer, squirrels and rabbits.

The predator population of this tract has been reduced to an almost bare minimum, although there are still some rac-

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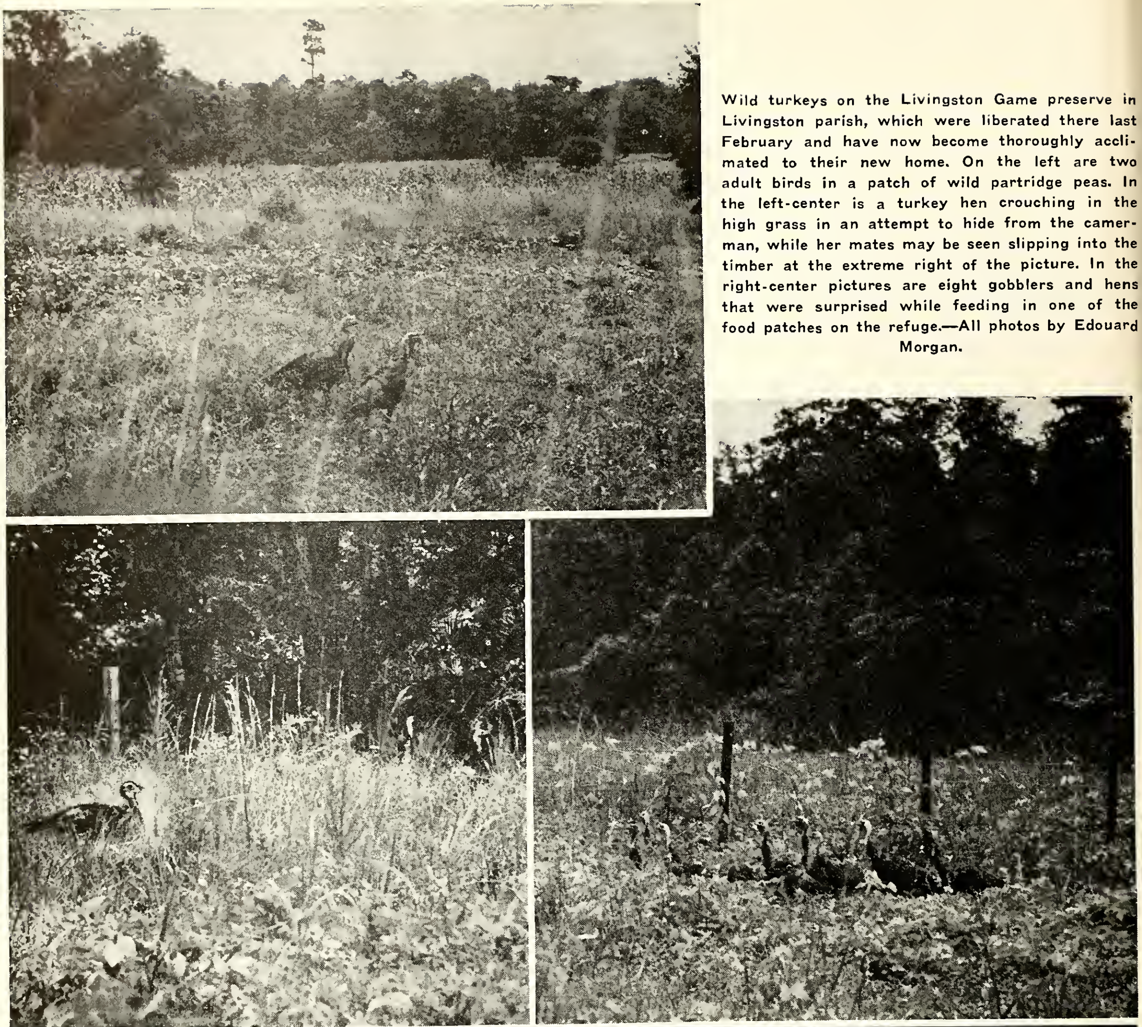

Wild turkeys on the Livingston Game preserve in Livingston parish, which were liberated there last February and have now become thoroughly acclimated to their new home. On the left are two adult birds in a patch of wild partridge peas. In the left-center is a turkey hen crouching in the high grass in an attempt to hide from the camerman, while her mates may be seen slipping into the timber at the extreme right of the picture. In the right-center pictures are eight gobblers and hens that were surprised while feeding in one of the food patches on the refuge.—All photos by Edouard Morgan.

Some adult and some more-than-half-grown wild turkeys heading for the tall timber as a camerman approaches on the Livingston preserve . . . an exceedingly fine group of birds, healthy and rapidly reverting to their wild state.

Scenes on the Livingston game preserve in Livingston parish. Upper left is the home of W. B. Smith, resident superintendent of the refuge, in the heart of the preserve. Upper right are (left to right) Carroll Perkins, federal biologist and game management expert, and Lyle St. Amant, both of the Pittman-Robertson projects in Louisiana, with W. B. Smith, who has active charge of the Livingston preserve, along with the jeep, maintained by the Department of Wild Life and Fisheries, for use in patrolling this 11,000-acre game refuge.—All photos by Edouard Morgan.

Upper left shows a beautiful stretch of the Ticfaw river, one of the boundaries of the Livingston preserve, and an excellent fishing stream. Upper right is a patch of soy beans and wild millet, one of the food plots maintained for both deer and wild turkeys. On left below is another food plot, planted deep in the preserve, where deer and turkey feed daily.

Turkeys are particularly sensitive to soil fertility, as it effects their ability to reproduce and establish themselves in numbers. Studies conducted on our state refuges indicate that wild turkeys thrive best on wooded areas that are given complete proctection from fire and overgrazing, and where debris from selective timber is allowed to return to the soil. Above is a fine specimen of wild turkey found on such a refuge.

GAME PRESERVE . . .

(Continued from Page 7)

coons, fox, skunks, hawks and snakes of the more prevalent varieties, as well as wild dogs, wandering cats, and, of course, occasionally a human, but it is highly unsafe for any law violator to be even seen in the vicinity of the refuge with a fire arm.

One of the first laws of any game preserve is the absoluate prohibition of all types of firearms. W. B. Smith, resident manager of the Livingston refuge, is constantly on patrol and reports excellent cooperation from the residents of the surrounding area in the protection of the deer and wild turkeys that have been transplanted to that sanctuary.

There were a few native wild turkeys in the Livingston preserve tract, before it was established as a game preserve. Last February a dozen more were imported and liberated. At the same time six deer, that had been trapped in other parts of the state, were brought into the Livingston refuge and liberated to join the small colony of native deer that had managed to elude hunters and their dogs. Now there will be no hunting in those 11,000 acres for at least 10 years, and if this first year's results are a barometer, that part of the state should again be a wild game paradise a decade from now.

As we came out of the superintendent's cottage in the early forenoon we saw a doe and her two fawns in a potato patch about 300 yards away, but that was as close as we could get. Later in the day we saw an eight point buck, two does and three fawns coming out of a patch of corn, at the edge of the timber a half mile or so from the cottage.

According to Lyle St. Amant and Carroll Perkins, federal biologists and game management experts with the Pittman-Robertson federal game projects, the Livingston refuge's maximum deer population should never exceed more than 400 deer. There will always be plenty of summer and winter browse for that number, but when the deer population becomes greater than that amount, there will be a natural migration to outside areas and in this way game preserve restocking eventually restocks its surrounding country. Both Mr. Perkins and Mr. St. Amant feel that barring epidemics the deer population saturation point should be reached well in advance of the prescribed ten years.

The same should hold true with the restocking of wild turkeys, although only a dozen or so were placed on this refuge last February. Broods of half-grown young turkeys were sighted several times during the day, and although our photographer was able to get close enough to the older birds for pictures, the young ones have become so wild it was impossible to get within camera range.

According to Perkins, St. Amant and Smith, the Livingston preserve is one of the most ideal in natural habitat for all kinds of game animals, birds and fish in the entire Southland. There are at least three big covies of quail within five minutes walking distance from the superintendent's cottage. In the evening rabbits come out of the timber and food patches, and scamper on the nicely tended lawn of the Smith home. And there is a wealth of squirrels throughout the timbered acres. There are even beaver on this refuge, although they have become very few in number in comparison to the big beaver colonies that at one time inhabited this area.

In the various bayous, rivers and tributary streams there may be found bass and sac-a-lait galore, with plenty of goggle-eye perch and bream.

Even before the refuge was established there were deer and wild turkeys in this section, but violators, dogs and predators had thinned them down to an almost complete extinction. Now, that no trespassing, hunting, dogs or firearms are permitted on the entire preserve, native deer and wild turkey are drifting back from the surrounding marshes and swampland, where they had sought refuge, and these, mingling with the restocked game, are expected to prove a great boon to the repopulation to the maximum, because of their wild characteristics. It will be only a matter of a short time until, they will have imbued the transplanted birds and animals with their own protective instincts.

Just how many of the transplanted turkeys have merged with the native wild turkey population of Livingston, it is difficult to determine, but the fact that the young ones are extremely wild, and some of the old hens have finally quit coming back to the original roosting and feeding spots, is almost positive proof that the restocked turkeys have begun producing genuine wild turkeys to repopulate this preserve.

Livingston is a virtual paradise for wild turkeys. It has plenty of timber free openings for food plots, and a wealth of summer and winter foods, such as sesbania, millet and chufas for the Summer time, and oats, wheat, buckwheat and Austrian winter peas, for the Fall and Winter. There is also a wealth of wild partridge

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LOUISIANA'S WILD LIFE MUSEUM ONE OF BEST

By Ernest S. Clements

Commissioner, Department of Wildlife and Fisheries, State of Louisiana

IN THE very heart of historic old New Orleans' French Quarter is one of the most elaborate as well as unique exhibits in America. It is the state owned museum of Louisiana's animal, bird and marine life, and is one of the very few institutions of its kind in this country. Even the location of this wildlife museum is steeped in the atmosphere and color of New Orleans' heritage. Housed in the centuries old and historic Presbytere beside the famous St. Louis Cathedral, and facing Jackson Square, this museum building, in itself, is a mecca for tourists and sightseers. Inside the building visitors find ultra-modern lighting effects in exhibit rooms still awe inspiring with their two-century old Spanish architecture.

Marble floors, mahogany paneled walls, lofty ceiling, arched doors, and gracefully sweeping stairs lend their dignity and beauty in complete harmony with flourescent lighting, glass display cases, spacious halls and artistically arranged specimens of Louisiana's wildlife resources.

Since New Orleans was founded in 1718 the Place d'Arms has been its central square. When the name was changed, early in the Nineteenth Century, to Jackson Square, the Presbytere was one of the three most important buildings in New Orleans, housing at that time the prelates of the St. Louis Cathedral, and standing as a companion building to the Cabildo, the seat of the Louisiana Territory government, which stood on the other side of the cathedral. With all three of these buildings facing Jackson Square, it is no wonder they are the greatest attraction for visitors to New Orleans' Vieux Carre.

Establishing a state-owned museum of Louisiana's wildlife in such a building accomplished a two-fold purpose. It assured a constant stream of visitors through the picturesque portals of the old Presbytere, and it brought these visitors, men, women and children from all parts of the world, into visual contact with the great variety of animal life, bird life and marine life of this state. And no state in the United States can boast such a variety of wild life as can Louisiana. In this state-owned and maintained museum is to be found every known specimen native to our bayous, marshes, lakes, forests, hills and vast prairies. Here you may see alligators, crocodiles, snakes and turtles of the marshes, along with bear, deer, wild boars, bobcats, wolves, panthers and thousands of other specimens of predators, game animals shore birds, game birds, wild water fowl, song birds, eagles, owls, hawks, etc.

———*Take a boy fishing*———

The unbounded varieties are not confined to the game bird and animal divisions, either. Predatory fishes such as sharks, garfish, porpoise, baracuda, mantas, reys and many others, vie for interest with hundreds of species of game fish all native to Louisiana waters.

In fact, in this museum are more than four thousand of the finest specimens of this state's wildlife, expertly mounted and displayed so that they became a constant educational asset in the promotion of conservation of Louisiana's natural resources.

Although the museum staff is small, as such units go, each is capable and eager

One of the portable exhibits, prepared in the Louisiana museum of wildlife, for exhibition at fairs and meetings throughout the state.

A ring-tailed cat killed in Winn Parish by Lon Anderson and John Cockerham. This animal is not a native of Louisiana, but ranges from Oregon to Panama. It was killed while the two men were on a fox hunt. It had a head like a fox, body and feet the size and shape of a housecat, a tail greatly similar to that of a raccoon, but longer.

in his or her efforts. Edouard Morgan, a technician and expert taxidermist, is in charge, working directly under the supervision of the department's director of education and publicity. In addition to his skill as a taxidermist, he is a very capable photographer, and movie projectionist. Assisting him is Eleanor Fairman, an artist who specializes in the simulation of nature. She prepares the natural habitat backgrounds for all birds, animal and fish displays ,as well as assiting in the arrangements of each exhibit. Another staff member is Patricia Mule; a supervisor of visual education, who has charge of the museum's more than fifty moving picture subjects, all of which have to do with depicting the advantages of sportsmanship in fishing and hunting, the need for conservation of the state's natural resources, the characteristics of various wildlife subjects, and a broader understanding of all of this state's wildlife population. A receptionist, who registers every visitor, and a handyman, complete the operating staff.

In addition to the museum's wildlife displays, there is also a movie theatre which seats approximately 250 persons. This is completely equipped for the showing of movies which have proved a great asset in the teaching of conservation. Throughout the year this movie theatre is used to exhibit pictures to groups of all kinds. School classes, throughout the school year, are daily attendants, from all sections of the state as well as from New Orleans and its immediately adjacent territory. Teachers of nature subjects, make regular appointments for their classes' attendance to assist in teaching their various subjects. Visiting groups of all kinds are shown these movies and without exception leave the museum with a much greater knowledge of Louisiana's wildlife and conservation programs than could possibly otherwise have been the case.

For practical teaching of conservation to the youth of Louisiana, this movie theatre in the museum has proved far and above the greatest method.

The movie method of expanding the state's conservation program is not confined to the museum's theatre, however. These movies are daily being sent, on request, to various groups, wildlife clubs, sportsmen's organizations and civic units throughout the state and nation, for showing, thus enhancing the scope of our educational efforts. Of recent years they have been in great demand for television also, and another link has been forged in our educational chain.

In addition to the permanent displays in the wildlife museum, the staff has in readiness at all times, portable exhibits which may be transported to various state and parish fairs, festivals, etc., of which there are a great number annually throughout Louisiana. These exhibits, needless to say, attract great attention wherever set up, and as a result are in constant demand. Thus it becomes necessary to maintain several such exhibits, each representing a different community's prevailing wildlife specimens.

Throughout the late summer, fall and early winter, these portable exhibits are in daily use, thus bringing our state's natural resources into prominent focus before thousands of persons each day.

Displays of her historic, cultural and natural wealth have long been one of Louisiana's foremost considerations, and this state's wildlife museum is undoubtedly her greatest instrument in impressing on the minds of Louisianians and visitors alike the great wealth of this state's natural wildlife and the need for sincere conservation of these assets.

———*Take a boy fishing*———

The bear moves with an awkward or shuffling gait because he has no clavicle to keep the shoulder bones steadily apart. Thus, as the forelegs are moved, the bladebones "work" much more on the side than is usual in animals.

———*Take a boy fishing*———

Especially wary when awake, the weasel is a very sound sleeper. It can often be taken up by the head, feet or tail and swung around for a considerable time before it begins to awake.

A 34½ pound yellow catfish, caught by A. L. "Boo" Boudreaux, Jr., in False River, while trolling for bass.

WHITE IBIS--BIRD OF CONTROVERSY

By James Nelson Gowanloch

Chief Biologist,
Louisiana Department of Wild Life and Fisheries

THE purpose of this article is to set down a discussion of what is certainly a most controversial matter, i.e., the role which the White Ibis plays in the pattern of life in some of our Louisiana areas.

Perhaps, it should be stated as a starting point that unlimited conservation of wild creatures is not a feasible, sound or practical policy. It is perfectly evident that very little wheat, corn and cattle could be raised on our vast central plains if the Buffalo still existed in those incredible numbers which once used to hold up transcontinental railroad trains while the vast herds crossed the railroad tracks. Equivalently, the incalculable populations of the Passenger Pigeon that once darked the sun for days in passing during migratory flights could most surely occupy no similar pattern in our present America. Yet, there are people who profoundly deplore the destruction to the almost vanishing point of the Buffalo (correctly, the Bison) and the complete extinction of the Passenger Pigeon.

There are certain highly emotional conservationists to whom everything clad in feathers (with the possible exception of Sally Rand) is as guileless as the cherubim and seraphim. There is for them no middle course, yet situations do arise wherein a middle course is the only practical one, not that a species should be exterminated or brought even remotely toward a dangerous level of population but that where the exuberant reproduction of a species may so impair valuable human activities that in the over-all pattern, control measures can and must justly be imposed.

One such case, in the opinion of the writer, is that of the White Ibis.

The White Ibis is one of four species of Ibises that have been known to occur in the State of Louisiana. It belongs to a family, technically the Threskiormthidae, which includes both the Ibis and the Spoonbill, and which is closely related to another family, the Storks and Wood Ibis, technically the Ciconiidae, which latter family contains the Wood Ibis, our only North American true stork.

The adult White Ibis is about two feet long with a somewhat more than three foot wing spread and about a six inch bill. The bill is curved downward, typical of the Ibises, but this characteristic cannot always be seen easily in flight. The bird is white except for the blackish tips of the primaries which are somewhat indescent with blue. The birds' bare skin of face, legs and feet is according to season, bright carmine or orange red. Young birds differ greatly, being hair brown on the neck and head with dull white streaking, fuscous on wings and tail and white underneath. The other three species of Ibises that occur in Louisiana are the Eastern Glossy Ibis, which is a dark colored bird shot with metallic greens and purples, the White Faced Glossy Ibis, similar to the Glossy Ibis except that it has white feathers around the base of the bill, and, lastly, the spectacular Scarlet Ibis, which, the size of the White Ibis, is completely a startling blaze of flame in its plumage.

The White Ibis has a peculiar flight, rapid and well sustained, with alternate synchronized periods of sailing. The morning and evening flights from the rookeries to the feeding grounds disperse the White Ibis far and wide, the birds characteristically fiying either in a broad column or in single file. The White Ibis has, also, another peculiar flight behavior wherein an entire flock will ascend high in the air and continuously circle as a mysteriously coordinated unit, then sudden plunge close to earth at high speed.

The White Ibis, like Cranes and Storks but unlike Herons, fly with their necks fully extended and can, therefore, be readily distinguished from our White Herons, such as the Snowy and American Egrets and the young of the Little Blue Heron.

———*Take a boy fishing*———

Two other birds somewhat superficially resemble the White Ibis in that they also are white in plumage and have black tipped wings and they, also, like the White Ibis, sometimes follow the peculiar behavior of sometimes circling in flights at great height. These are the Wood Ibis (not an Ibis but a true stork) and the White Pelican.

The White Ibis has increased greatly in local concentrations during the past two decades, as the writer has personally observed. Dr. Harry Church Oberholser, in his "The Bird Life of Louisiana", stated twelve years ago that the White Ibis was "a rather rare permanent resident in southern Louisiana, from Cameron Parish, Avery Island and New Orleans, north to Lake Pontchartrain, Bayou Sara, Lottie, and Toomey. It breeds in colonies with herons of various species, but only a few of such nesting groups now remain, for it is apparently much less numerous than formerly."

White Ibises have a human interest from remote antiquity. The White Ibis in Egypt appeared at the time that the flooding of the Nile brought irrigation and fertilization to the land. Acclaimed as a god, the White Ibis is represented both by sculptured images and in tomb hierglyphics five thousand years ago.

White Ibises are sharply gregarious birds. Althought they often nest with other species such as the Herons, even in such colonies, they usually maintain their own sectional territories. Some concept of the size of these colonies may be gained from citing specific examples. One White Ibis rookery in Florida included six thousand nests, another Florida rookery contained one hundred thousand birds and still another Florida rookery was populated by the astonishing number of six hundred thousand birds. The neighborliness of the White Ibis is indicated by the fact that Oberholser describes an instance of fifty nests being placed in a single tree.

The location of the White Ibis colony is determined chiefly by the proximity of suitable nesting sites (mangroves, cypresses or other vegetation) to a sufficient food supply. So voracious are the White Ibises that their chief food, the crayfish, may be exhausted over a wide radius, compelling the birds to carry out long morning and evening flights to and from their feeding grounds. The writer has repeatedly flown over the two huge White Ibis colonies near Manchac, which are mentioned below, and has been profoundly impressed by the memorable pattern of these great numbers of glistening white birds flying their formations and at evening converging to the rookery from surprisingly long distances.

The contamination produced by a White Ibis colony is so great that frequently it will completely destroy all the vegetation and compel the White Ibises to seek a new home each year.

The White Ibis builds a loosely constructed nest of dead twigs, usually lined with green leaves, and a great deal of Spanish moss. The two to five (usually three or four) greenish-white eggs spotted with varying shades of brown hatch in three weeks. When only partly grown, young White Ibises become young Tarzans and take to the bushes and trees, often scattering over considerable distances and adding to the difficulties endured by their parents in keeping the family well fed.

Now, at long last, is indicated the real reason why White Ibises are apparently becoming a biological problem in Louisiana.

Repeatedly, within the last few years, the writer has received complaints of the rapid expansion of White Ibis colonies,

(Continued on Page 16)

1—Adult white ibis in
Ponchatoula, La.

2—William Shepherd,
Society, catching a y

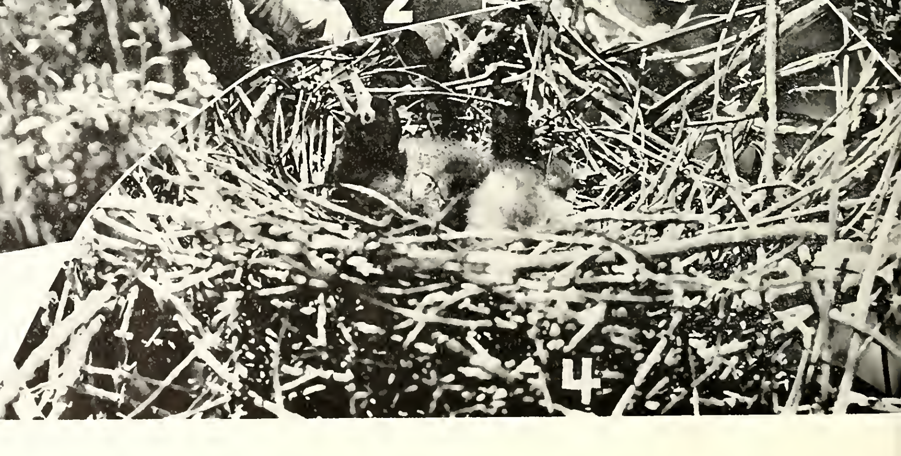
3—Young Ibis scramble
escape capture.

4—Downy young in a n
shore of Lake Manch

5—Mr. Shepherd with
Department of Wild
muck, banding ibis.

6—Another picture of
banding birds they ha

7—Special pliers are use
the bird.



ge nesting colony near

Louisiana Ornithological
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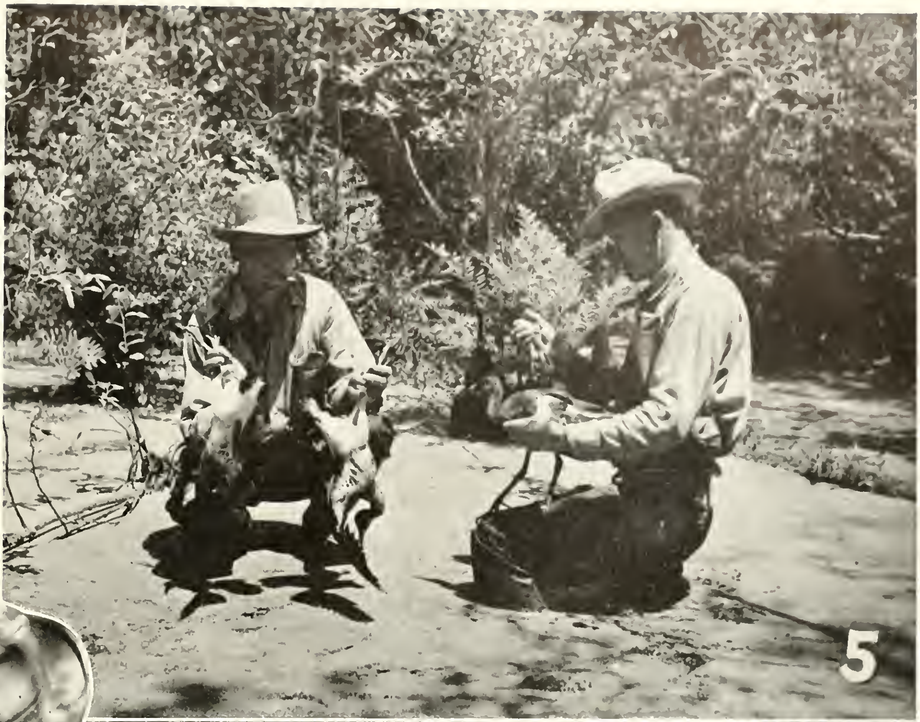
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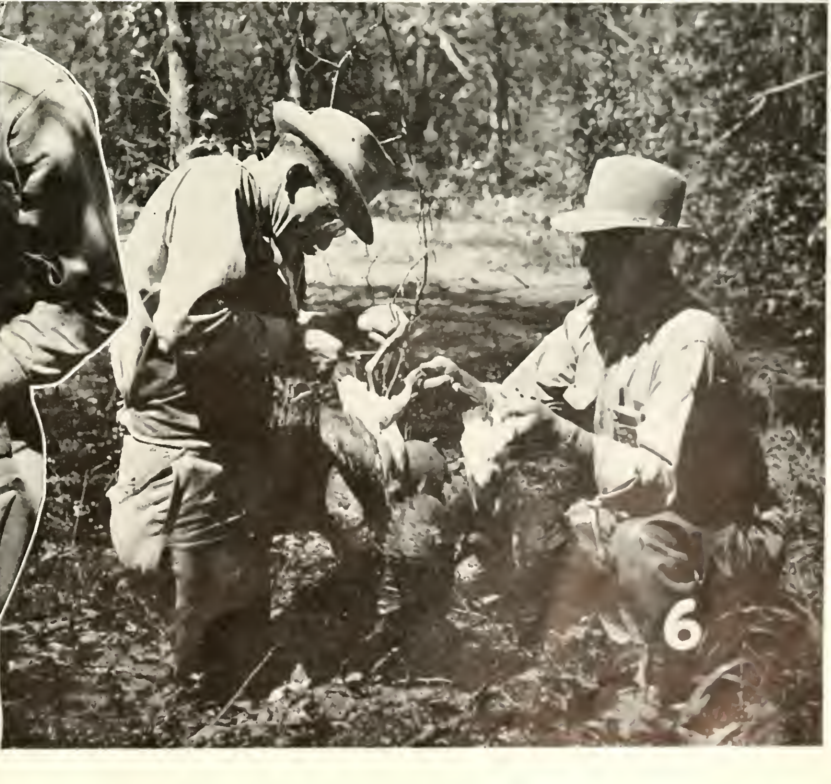
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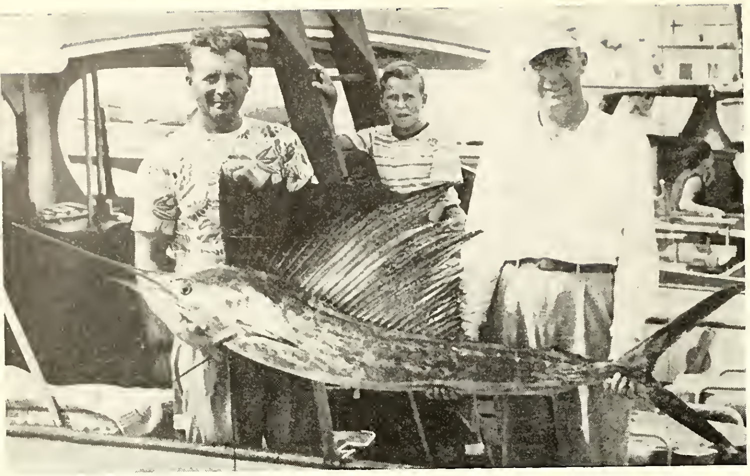


Here's actual proof that sail fish may be captured in Louisiana waters if fished for properly. It is an 84½ inch sailfish, taken on July 4th, off Grand Isle, by T. B. Godfrey, of Monroe, La., fishing from Jack Brown's boat, the "Sea Hawk." Left to right, in the picture are Jack Brown, his son Gerry, and Mr. Godfrey.

WHITE IBIS . . .

(Continued from Page 13)

particularly two huge colonies located north of Manchac. The writer has made repeated observations of those colonies and can state that the reports of their magnitude were not exaggerated. The people who live in the area believe that these always hungry White Ibises are so amundant and so voracious that they have coused a serious and steadily mounting decrease in the crayfish population. Crayfish form the chief food of the White Ibis in such areas. Grasshoppers, other insects and small snakes are also eaten. One observer counted 1391 crayfishes in the stomachs of 194 White Ibises examined. This destruction of crayfish, the local residents believe, may form a significant and damaging change in the animal relationships of the area since crayfish form the *favorite and chief food of the mink not only in Louisiana but thoughout the country.

They, therefore, believe that some measure of control to reduce the White Ibis population is desirable. When the rate of expansion of these colonies is considered and observation is made of the extent and pressure exerted by the foraging of the White Ibises, particularly during the breeding period when they have to feed not only themselves but their rapidly growing young, the simplest calculation of the number of crayfish needed per day inevitably indicates the destruction of enormous numbers of crayfish with a corresponding impact upon the other animals, mink, fishes and many other for which crayfish form important fare.

The Glossy Ibis, at least when it lives along the Louisiana coastal areas (the writer has personally observed) also feeds chiefly and often exclusively on a crustacean, but in this instance it is the Fiddler Crab, an animal of peculiar fecundity and one which is valueless as a human food.

There is still another factor that may be of importance which is now under investigation by the Public Health Service of the United States Government and that is the possibility that the White Ibis may harbor the virus that causes the disasrous distase known as Equine Encephalomylities This malady, which two years ago killed some 30,000 horses in Louisiana, and last year killed some 18,000 horses and which, in addition, took in a year some twenty human lives, may pass part of its cycle in the White Ibis. This matter is now under scientific investigation and no conclusive results have yet been obtained but should it prove that this suspicion is based upon fact, remedial action would of necessity be planned and executed.

It must here be emphasized that the White Ibis is strictly protected under both State and Federal laws and that any control measures would absolutely require to be carried out under special instructions of both State and Federal Government, after consideration by these authorities of all facts in the case and would, further, of necessity, be carried out under strictest supervision of their delegated officials.

Such special measures for relief by the control of Federal and State protected birds have previously been accomplished. Two examples may be cited. First, the control of the Herring Gull in Maine, where deliberate destruction of the eggs by various chemical means was successful; second, the case of the Fulvous Tree Duck in southwestern Louisiana, where the owners and agents of the rice growers, under special permit, destroyed these birds by the use of firearms.

Other control measures might possibly be effective without involving actual destruction of eggs, of young or of adult White Ibises.

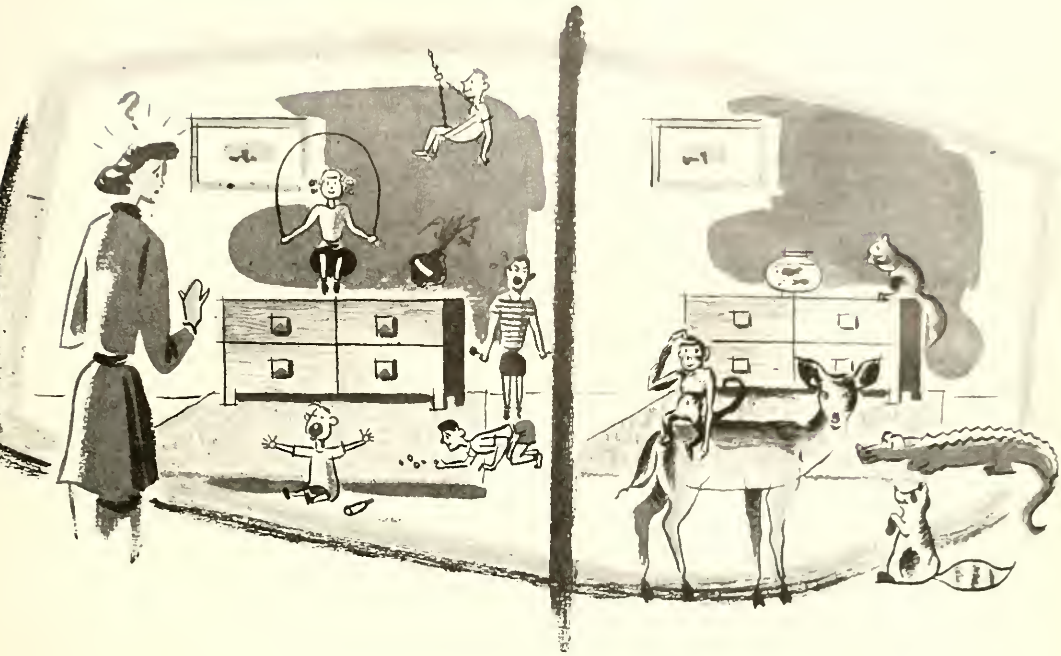
One possibility would, perhaps, be the use of automatic detonators which are inexpensive, require little servicing and are cheaply operated. The automatic explosions of generated acetylene gas have been found to be successful in driving away proctected birds such as Horned Larks in Califorina, and many species in the eastern United States, where these species in excessive numbers attacked and destroyed crops such as lettuce and cranberries.

Many competent nature lovers whose primary interest is concerned with birds will almost, as a conditioned reflex, oppose any measures that will disturb the domestic bliss of any birds and will argue that drainage with its consequent lowering of water table has been the central agent in reducing crayfish populations. This argument, however, is a two-edged sword for it is correspondingly clear that as crayfish

(Continued on Page 26)

Mrs. W. A. Harris, of Cottonport, La., with a string of white perch taken from a borrow pit near Bordelonville.

MENAGE OR MENAGERIE



By Gwen Kirtley Perkins

IN THE beginning our family consisted of a wildlife biologist and his bride and two dogs— two people and two pets. This ratio is adequate for the average family, but alas, ours has not been exactly that!

Our first pets were well-trained bird dogs, "Dot" and "Mac", with definite personalities. I was amazed to see them in action—hunting, pointing and retrieving. I hadn't known dogs had that much intelligence. The dogs usually stayed in their pen, but when the weather turned cold, we often let them in to warm by the fireplace, and listen while the hunters told and re-told of each day's hunt.

When we went riding "Dot" insisted on the front seat of the car, alongside my husband, and since she'd been in the family longer, I had to recognize her priority.

"Mac" thought that tail wagging was for puppies only, so he greeted people with a great, big, impulsive hug. They all thought him a bit mad, but he was just so glad to see them. He was a great democrat. Newsboys, bill collectors, politicians, hired girls or hoboes—he embraced them all. Much to our sorrow he finally caressed a dogcatcher.

Wives become accustomed to unexpected company for dinner, but with a husband like mine, I soon learned that company was the least I could expect.

As I remember, it began with a beaver. Have you ever tried fixing meals for a week-end visiting beaver?

"What do beavers eat?", I asked.

"Bark, twigs, roots and grasses, and various aquatic plants are preferred beaver food," I was informed.

I scrapped up some things and offered them to the chestnut-brown beaver, but he balked at my menu. Perhaps he pined for food more highly seasoned, or mourned for his mate back on the banks of the creek. After a few days under my dietray care the poor beaver was fit only for the museum where he resides to this day—well stuffed.

"Guess what I found today?" asked my husband upon his return from a squirrel hunt.

"Squirrels?" I asked, none too brightly. (This was before I learned that when a man goes hunting for squirrel he gets squirrels, and if he doesn't that's the last subject in the world to bring up.)

"Naturally," was his patient reply. "What I found was a baby skunk. Right in the middle of the swamp!"

"A skunk! What do I do with a skunk? What if it——!"

"Don't worry, it won't! I got to wondering how old a skunk has to be to stink, and I decided to turn it loose. But don't feel too bad. One of these days I'll find one and get it de-odorized."

I think to myself that I can wait a long time for that day.

Then our pet-people ratio was momentarily upset up the arrival of a young, male Perkins. I did not dream that that was to be the only period that our household would consist of more folks than fauna.

On a trip to the coastal marshes my biologist found a baby deer that had been deserted and marooned by the floodwaters. It was in a pitiful condition, starved and mosquito bitten, so naturally he brought it home. We fed it warm milk, using one of the baby's worn-out nipples, and doctored it with "Uncle Charlie's Salve, Good for Man or Beast", and in a short time the deer was strong enough to walk around the house. It's hoofs sounded so strange tapping across the hardwood floor. It was a beautiful little animal with its lovely, soft spotted coat, and with eyes even softer.

When I took the baby outside for his sunbath, I took the deer out, too. The first time lacking foresight, I failed to have

Sidney P. Morel, left, and Bob Schellinger with redfish, weighing eight to 10 pounds each, taken in Bayou Mussolini, back of Shell Beach.

a rope on the little deer. It had always stayed right at my heels in the house, but once outside it became suddenly shy and wouldn't come close to me. The dogs barked a greeting and the deer leaped across the lawn and headed down the street. I jumped after it. The dogs, seeing me give chase, got into the race, too. I yelled at the crazy dogs to go back home, but they evidently thought I was urging them on, because they ran faster and faster. There we went, running, barking and yelling, right down the middle of the avenue.

The quiet, napping neighborhood came to sudden life as heads popped out of "windows, necks craned out of doors, and curious children hurried out to see all the excitement. Seeing all the disturbance we were creating, I would have given up, but fearing the dogs might hurt the deer if they caught it, I kept running. I don't know what would have become of us, if one little boy hadn't sprinted in ahead of the deer and headed it back past another lad who tackled it and sat on it until I loped up. I took the struggling animal from the boy, who was astride it, and sat down on the curb to get my wind. I rested for a few minutes, warding off the blows from the sharp little hoofs, and kicking back the dogs, surrounded by an admiring audience of children.

———*Take a boy fishing*———

"Boy, oh boy! That was some fun!" said the boy who had caught the fawn. "You sure can run fast for a lady!"

"Oh, that wasn't so fast. You ought to have seen me run when I was younger. Why I was the fastest runner in Adams Grade School." I modestly replied.

While basking in such flattery, I suddenly remembered my little son, who I'd left taking his sunbath! Hurrying through the crowd of boys and girls I started for the house lugging the still, struggling deer, and scolding the dogs every step of the way. My baby was quite red when I got there. I hoped that part of his color was due to his crying so long and loud and unattended. However, from that day on he had a fine suntan.

Next time I brought the deer out he was tied with a strong leash. The dogs were very disappointed. It had been so much more fun when we all ran.

The deer created another sensation when we took it visiting. The unsuspecting relatives were quite amazed to wake up and find a spotted fawn dashing about the bedroom instead of the proverbial pink elephants!

The deer had been such a darling that when my husband suggested bringing home some muskrats for observation, I readily agreed.

I sighed when I saw them, though. "I hadn't realized that muskrats looked so mousey."

"Muskrats are very valuable animals, my dear. The pelts of these ugly rodents bring in millions of dollars to the Louisiana trappers each year."

"Well, that's very interesting, Im sure, but personally I find muskrats more fascinating in coats than in cages."

While the scientific observation of muskrats was going on I found out that I was supposed to feed, water and watch them. Ordinarily an animal will eventually respond to attention and food, but these sullen vegetarians always remained strangers.

One night a courious raccoon meandered out of the moonlit marsh and onto the lugger that was being used in the muskrat investigation work. Apparently liking what he found, he stowed away. By the time the boat docked a few days later, he had adopted himself into the family. Now here was a pet more to my liking. He had a wonderful sense of humor, an incurable curiosity and an expressive vocabulary.

We were bringing up our baby on the government bulletin "Infant Care" and by skipping a few pages and ad libbing here and there, we brought up the baby, the deer, the muskrats and now the raccoon—all on the same formula. The raccoon thrived and lived a carefree life with us until one day when company came, Cousin Wilma from Alabama.

"Seeing that ring-tailed 'coon reminds me. Have you all evah tried baked 'coon with sweet potatoes?" asked Cousin Wilma.

A short time after that the raccoon disappeared. Whether his departure was a result of hearing the call of the wild or Cousin Wilma's remarks, I never knew. Somehow I feel that Cousin Wilma was to blame.

An opossum was next.

"You'll get a big kick out of this one, Honey," said my husband. " 'Possums have babies so small that they say eighteen of them can be placed in a teaspoon. As soon as they're born they climb up and get into their mother's pouch—sort of like kangaroos. Then when theyre a month or so old, they crawl out and ride on her back."

I looked at this mysterious, marsupial mammal with a little more interest. It was about the size of a housecat with long, naked ears and tail, and with grizzly, gray fur. Rather noisey looking, too. So we added another animal to our menagerie.

The opossum was too old for baby food so I tried to feed it scraps from the table. It consistently refused to come across with any offspring, but it played 'possum just like opossums are supposed to.

"This apparently lifeless condition—" explained my husband, "this playing 'possum" is said by the authorities to be brought about by a nervous shock beyond the control of the animal. Thus you have a vivid example of the effect of some of your cooking."

Four little kittens abandoned on a lonely road were brought home in a sack by Guess Who. With the baby's wails, the kittens' yowls and the dog's howls, our home sounded like a school for student violinists. My patience finally became as frayed as the upholstery where the cats manicured their claws. There were just too many cats to keep in milk and mice!

I gave a neighbor boy two, but his mother sent him back with them before lunch. I put them out at night, but they refused to wander away with the alley cats.

Taking advantage of my husband's absence (probably away on another animal acquisition project) I drove out into the country and desopited the cats at the gate of a dairy.

Early the next morning I heard the doorbell ring. It was the boy from across

(Continued on Page 26)

Gayle Koonce, of Jonesboro, and W. L. Hawkins, of Shreveport, two boys who know how to fish and have proved it with this catch of bream, taken in Clear Lake, near Clarence, La.

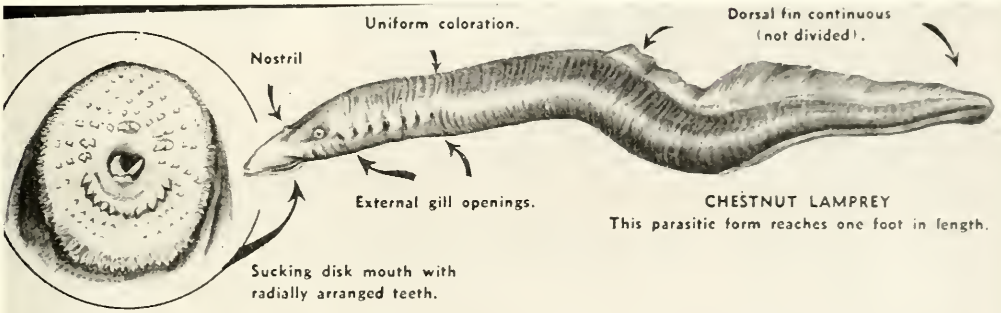
LAMPREY IS DEADLY MENACE

By James Nelson Gowanloch

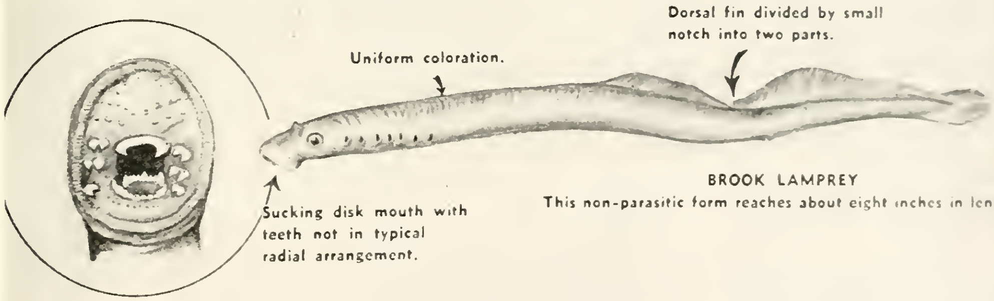
(Chief Biologist
Louisiana Department of Wild Life
and Fisheries)

LAMPREYS, which constitute one of the strangest group of fishes in the world, and which do occur in Louisiana, have recently aroused continent wide interest and alarm. The reason for this is that one species of Lamprey, the Sea Lamprey, has caused within the last few years one of the most sweeping disasters in the history of North American game and commercial fishing. It is the purpose of this article to set down the description of this dangerous Lamprey, the Sea Lamprey, also, the description of the non-dangerous but likewise parasitic Chestnut Lamprey, specimens of which have been sent in to the writer by sport fishermen from various parts of Louisiana, and, also, to describe the non-parasitic Lamprey, specimens of which have not yet been reported from our state.

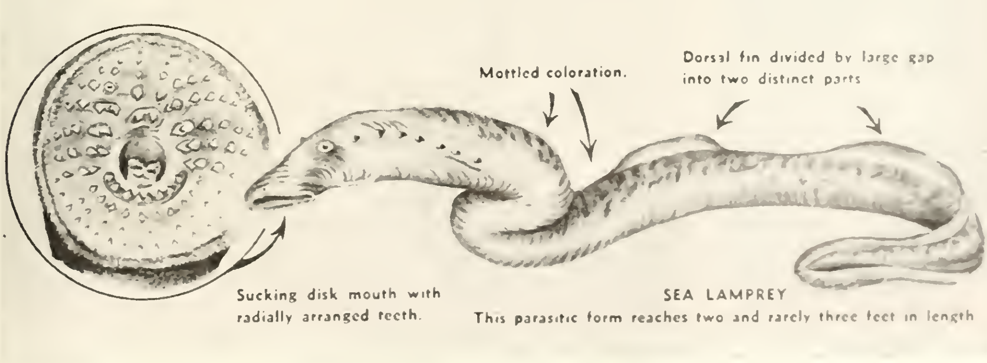
Lampreys, with the exception of the peculiar two to three inch long worm-like Lancelet fishes, are the most primitive of all our fish species. Lampreys are immediately distinguished from the higher fishes by the fact that they have no gill covers, no jaws and no paired fins. Instead of gill covers, Lampreys possess seven pairs of laterally placed apertures which are not consolidated, as in the higher fishes, into a single system. Instead of jaws, Lampreys possess sucker-like mouths provided with, in the case of the parasitic species, concentrically placed circles of rasping teeth and, in the case of the non-parasitic species, scattered groups of weaker, similar structures. Lampreys conspicuously lack the paired fins (pectorial fins and pelvic fins) characteristic so obvious in our common game and commercial fish and which


Uniform coloration.
Dorsal fin continuous (not divided).
Nostril
External gill openings.
Sucking disk mouth with radially arranged teeth.

CHESTNUT LAMPREY
This parasitic form reaches one foot in length.


Dorsal fin divided by small notch into two parts.
Uniform coloration.
Sucking disk mouth with teeth not in typical radial arrangement.

BROOK LAMPREY
This non-parasitic form reaches about eight inches in length


Dorsal fin divided by large gap into two distinct parts
Mottled coloration.
Sucking disk mouth with radially arranged teeth.

SEA LAMPREY
This parasitic form reaches two and rarely three feet in length

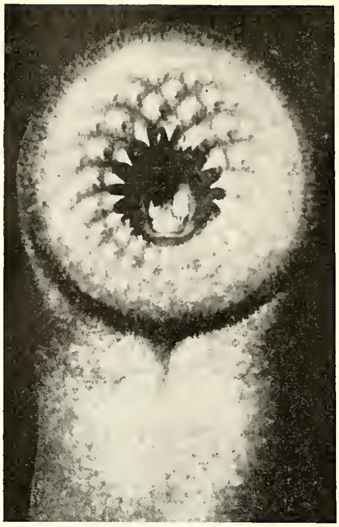
fins actually correspond to and are the precursors of the wings and legs of birds and the fore legs and hind legs of other higher animals.

The two groups of Lampreys, the non-parasitic and the parasitic, besides differing in their external appearance, also have a most extraordinary difference in their life histories.

All Lampreys lay eggs which hatch into strange larvae, technically known as the **Ammocoetes** stage. These larvae, which feed on both plant and small animal materials, may pass three or four years sheltered in the mud bottoms of rivers before they transform into the adult stage. The parasitic Lampreys become active predators living on game and commercial fish. By means of their rasping mouth disks, they bore their way into their prey, feed upon the blood, flesh and organs of the fish attacked, and in the end leave merely a hollow skin containing a well-cleaned skeleton. Even where the attacked fish, through some circumstance, is able to free itself from the Lamprey, the wounds inflicted are so severe that death through hemorrage or subsequent infection frequently ensues.

Sharply contrasting with this life history is that of the non-parasitic Lamprey, one example of which, the Brook Lamprey, is illustrated herewith. Once these non-parasitic species transform into the adult stage, their alimentary tract degenerates and they cease to feed at all. They mate and then quickly die. Likewise, the parasitic species of Lamprey, although they may live for several years in the adult stage, also die following their breeding season.

It must be explicitly empharized that the Sea Lampreys, concerning which we now speak, does not occur, as far as is known, in the State of Louisiana. The Sea Lamprey has an extraordinarily wide range, occurring in the Atlantic ocean from the northwestern coast of Africa, western Europe, westward to Greenland and southward along the Atlantic coast of North America as far as northern Florida. The most recent authoritative work, "Fishes of the Western North Atlantis, Volume I," states, "It is not known in the Gulf of Mexico nor from the drainage area of the latter." This grisly animal has been the cause of one of the most spectacular destructions of game and commercial fish in the history of our continent. Attaining a length of as much as forty inches, it is blackish in color, mottled, and with its sucker-like mouth (buccal funnel), which is much broader than the body, provided with strong, pointed teeth. The dorsal fin, as shown in the illustration, is divided very distinctly by a large space into two parts.



A closeup of the circular mouth of a sea lamprey. Lacking both upper and lower jaws, and having teeth radiating in all directions in curved rows, the mouth of the sea lamprey is used solely as a sucking disc.

Originally, the Sea Lamprey lived in the ocean and migrated up fresh water streams to breed. Certain conditions were necessary for successful spawning, including the presence of gravel, to which the females, by means of their peculiar sucking disks, became attached and after mating produced as many as 230,000 eggs. The **Ammocoetes** larvae hatched from these eggs remained buried in the river bottoms for as long as four or five years, being known at this time as "Mud Lampreys," then they transformed into the adult stage and descended into the ocean and became dangerous, destructive parasites on voluable fish species. The end result was that the Sea Lamprey did its damage at sea and did not harm fresh water fish. However, a group of Sea Lampreys became landlocked in Lake Ontario and carrying out their full life history in fresh water, they became disastrous destroyers of fresh water fish. This presented a dangerous situation which fortunately at that time was prevented from spreading because the Lampreys were incapable of ascending Niagara Falls and were thus barred from the highly valuable fisheries of the other Great Lakes. The Welland Canal was constructed and the gateway to disaster opened. The Sea Lamprey reached Lake Erie in 1921, Lake Michigan in 1936, then spread into Lake Huron and Lake Superior. It has now extended its range as far west as Chicago.

The impact of this parasite on tremendously valuable fisheries which formed the livelihood of many thousands of people can scarcely be exaggerated. A fisherman, for example, who ordinarily caught six thousand pounds of Lake Trout with his four miles of nets set in Lake Michigan off Waukegan, Illinois, five years ago, last year caught not six thousand pounds of Lake Trout but simply six Lake Trout. The Lake Michigan catch fell from six and a half million pounds in 1945, to a half million pounds in 1949. The Lake Huron catch fell from two million pounds per year to zero. In terms of dollars, Lampreys are costing commercial fishermen, it is estimated, $3,200,000 a year and this loss is undoubtedly matched by an equivalent monetary loss to sport fishermen.

The extent of this expanding distaster was quickly realized by American and Candian federal, state and provincial authorities. Highly organized programs employing the skills of specialists and the use of every possible known technique were initiated and are now being pursued but none has yet proven successful. Among the devices utilized experimentally were electric screens to prevent the entrance of the adult Lampreys into new areas. These operations, extremely expensive, are in spite of the greatest viligance capable of complete failure since the ingress of only a few breeding Lampreys can provide a potential population of millions.

Attempts to poison the beds in which the **Ammocoetes** larvae grow up prove costly and ineffective since it is so difficult to impregnate a silted river bottom with a control concentration of a toxic substance. The most recent device that has been tried with apparently considerable promise of success is an electrocuting fence which, thrown across the Lamprey breeding areas, can be used to kill the transformed young Lampreys as they pass through the meshes of this charged mesh work. It is perfectly clear, however, that the engineering alone involved in carying out such a program is complicated, costly and almost incapable of being complete.

It should be noted in passing that Sea Lampreys were regarded during the Middle Ages as great delicacies. The recipe for their preapartion for some weird reason required that they be drowned in wine. They were caught in large numbers for market as lates as the middle of the last century but for some reason were never used in the southern part of their American range. Later, they became chiefly utilized as bait for Codfishing and other commercial fisheries. The North American distribution of the Sea Lamprey rises in intensity of concentration as one moves southward from Greenland, through New Hampshire (where a river is named for them), to a center of abundance in the coastal areas between Delaware and Chesapeake bays. It should also be noted in passing that the Lampreys here discussed are no relation whatever to the peculiar "Lamper Eels" which are actually tailed amphibians, common in Louisiana, and invariably when they are discovered

—Take a boy fishing—

during ditching operations, objects of profound horror although they are quite harmless.

The question of profound importance to Louisiana fishermen is, naturally: "Are we in danger of being invaded by this frightened pest?"

The writer has endeavored to examine all the available facts and to discuss the matter with authoritative researchers engaged in direct attack upon this problem. The answer appears to be that as far as can now be understood, the Sea Lamprey cannot successfully spawn under the conditions which exist in the Lower Mississippi River.

The writer recently had as his guest, Dr. Ralph Hile, Supervisory Fishery Research Biologist, who has been long familiar with the Sea Lamprey. Dr. Hile, in personal correspondence, states:

"According to my best information the most southerly record of the sea lamprey is the one given for northeastern Florida, by Evermann and Kendall, in their paper on the fishes of Florida, published in the Report of the U. S. Commissioner of Fisheries for 1899. There is no record of sea lampreys in the Gulf of Mexico, and there is no reason to believe that it occurs there.

"When I talked with you, I mentioned our fears that the sea lamprey might be able to find its way into the Mississippi River system through the waterways of the Calumet area. However, Dr. Louie Krumholz of Indiana University, who examined this region at highwater level only last month, reports that this would not be possible. He found a half mile of dry stream bed in the Old Calumet Channel through which the lampreys would have to migrate. The only other possible route is through the Chicago River. We have no apprehensions that the lamprey might utilize that stream."

It is of high importance, however, that the closest watch be kept for the possible appearance of the Sea Lamprey in Louisiana.

Apparently, the Chestnut Lamprey nowhere in its entire range effects serious damage, although the writer has received specimens that have been taken while attacking Catfish, Largemouth Black Bass ("Green Trout"), Buffalofish, White Crappie and Black Crappie and other species.

It is desirable that any Lampreys taken be sent in, directed to the writer at the Department of Wild Life and Fisheries, 126 Civil Courts Building, New Orleans, La. These specimens should be placed in a jar containing one part of formaldehyde to nine parts of water. The side of the body should be slit to prement the entrance of the chemical. Information needed is the date and place of capture and the identity of the fish to which the Lamprey was attached. Not only will this cooperation serve a good scientific purpose in increasing our knowledge of the distribution of Lampreys in Louisiana, but it can provide the Department of Wild Life and Fisheries with an alerted warning service against invasion by the Sea Lamprey. Should this species through any circumstances become adapted to Louisiana conditions, there is simply no limit to the possible damage it can do to our fisheries. It must be remembered that before its adaptation to a permanent fresh water life cycle, it had a completely different way of life. No one could predict that within a matter of only a few years, it could wipe out the value of millions of dollars invested in the fisheries of the Great Lakes. The writer has repeatedly received from the Great Lakes areas letters from commercial fishermen whose large enterprises have been completely wiped out and who are now seeking to engage in fishing operations in our State. Add to this the realization of the pattern wheregy the Sea Lamprey has completely wiped out vast equities concerned with game fishing in the Great Lakes and it will then be realized how much of a catastrophe this extraordinary parasite could cause where, by some unpredictible chain of events and adaptations, it could learn to live under Louisiana conditions.

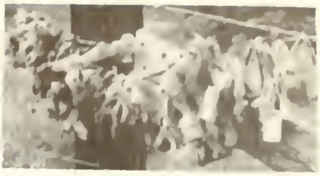
There is here added a brief statement concerning the kinds of Lampreys that occur, together with a description of them and the means of distinguishing them. So far, the specimens from Louisiana sent to the write have all belonged to the Chestnut Lamprey but other species here included are wide ranging and they might conceivably appear in Louisiana. The descriptions and key are abbreviated. Reference should be made to the illustration since therein are indicated the characteristics of the fins and of the mouth which are used to distinguish the various species.

Group A. The parasitic Lampreys.

All these have the mouth disk (buccal funnel) provided with numerous teeth which radiate in all directions from the central actual mouth. The dorsal fin continuous.

1. Chestnut Lamprey (**Ichthyomyzon castaneus.**) The name of this species is quite confusing since it is also called the Silver Lamprey and the Western Lamprey. Its present name is **Ichthyomyzon castaneus.** It was formerly known technically as **Ichthyomyzon concolor.** The Chestnut Lamprey reaches about twelve inches in length, has the dorsal fin which is continuous but with a broad notch, dorsal fin merges into the caudal (tail fin), it has a dark sport above each of the gill pores (external gill openings), the buccal funnel when expanded is much wider than the body.

2. Sea Lamprey (**Petromyzon marinus.**) Forty inches long, dorsal fin divided into two distinct sections, the posterior part merging with the tail fin. Color is blackish with considerable mottling.



A string of 54 bobcat scalps taken by T. E. Harris, M. W. Bedgood and W. W. Maddox, members of the predator control unit of trappers of the department of Wild Life and Fisheries. All these cats were taken in the area between Krotz Springs and Bunkie.

Group B. Non-parasitic Lapreys.

The buccal funnel has teeth which do not radiate from the mouth but lie in scattered groups.

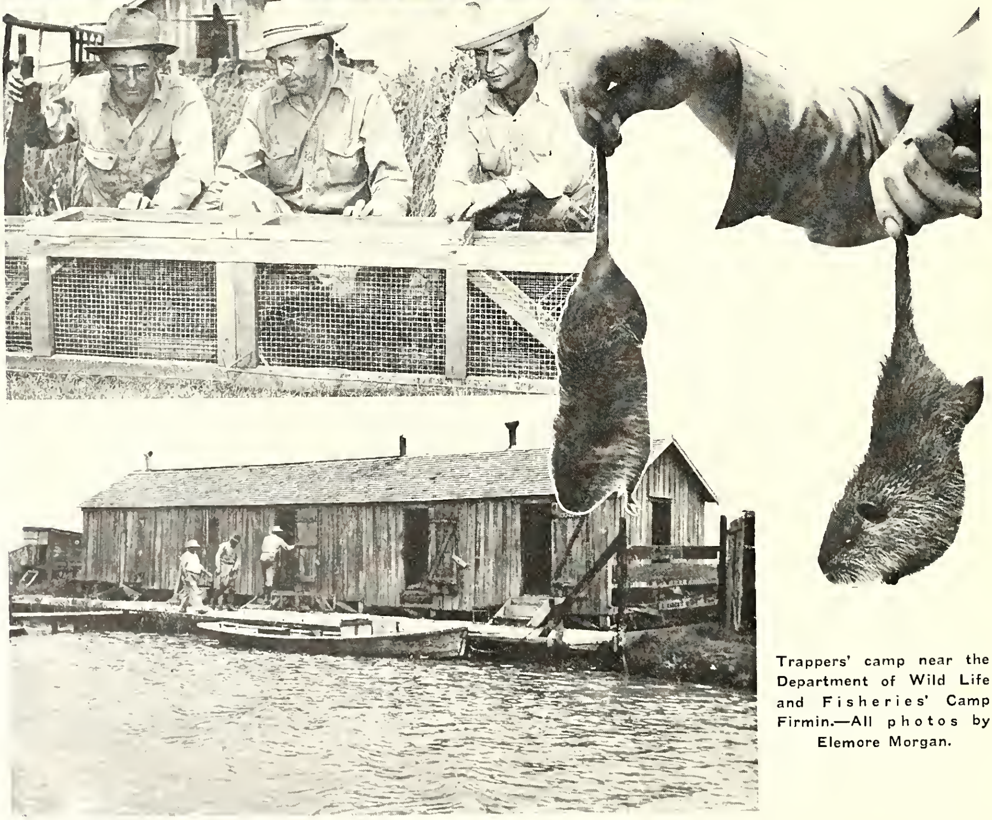
1. The Brook Lamprey (See the middle figure in the accompanying illustration.) (**Lethenteron appendix.**) (Formerly **Lethenteron wilderi.**) This species normally ranges from Canada south to Maryland and west to Wisconsin and Iowa. It reaches eight inches in length and is bluish in color. The various other non-parasitic Lampreys are distingishable by certain technical differences in the arrangement of their teeth but the Brook Lamprey can be accepted as a good example of the non-parasitic group.

The writer will deeply appreciate cooperation of sportsmen in providing specimens together with accompanying data whenever Lampreys are discovered since at present our knowledge of the distribution of the extraordinary fish in Louisiana waters is extremely meager, sharply contrasting with their potential economic importance.

———*Take a boy fishing*———

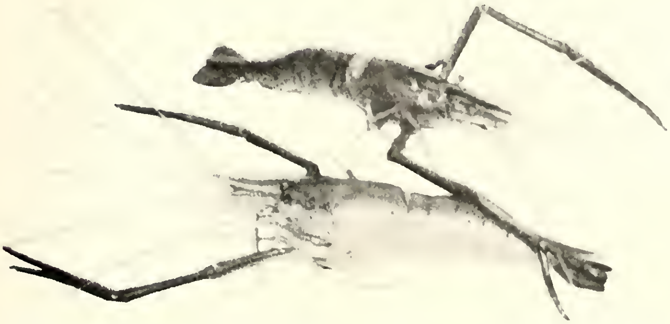
Jerry and Jim Alexander with a nice string of crappies caught in Lake Bistineau.

Live trapping nutria near Camp Firmin on Vermilion Bay. (Left) They always hold nutria by tail to remove from trap. (Left-Center) The trapping crew, left to right, Odey Romero, Johnny Breaux and Aubrey DeBlanc. (Below) Two five day old nutria.



Trappers' camp near the Department of Wild Life and Fisheries' Camp Firmin.—All photos by Elemore Morgan.

NEW GIANT SHRIMP DISCOVERED



This fresh-water shrimp, a close cousin of our common Louisiana river shrimp, attains a weight of as much as three and a half pounds. It reaches in Louisiana the extreme northern limit of its range. The recent capture of twenty pounds of this Central American species establishes a new record for this State.

IT'S LUCKY for the chap who said there was nothing new under the sun, that he didn't take in the fishing waters of Louisiana in that statement, for hardly a week passes that some new specimen of marine life is not brought to the department of Wild Life and Fisheries for identification.

One of the latest of these is a new kind of shrimp taken by Captain Percy Pitre, of Cut Off, La., while trawling for bait in a bayou near Grand Isle, during the recent Grand Isle Tarpon rodeo. Needless to say these big and strange shrimp excited almost as much comment as the big tarpon and jewfish registered as catches during the rodeo.

Captain Pitre took approximately 20 pounds of these unusual shrimp out of his trawl, proving that there must have been a quantity of them in those waters, and when a dozen or more of them were brought to Dr. James Nelson Gowanloch, chief biologist of the department of Wild Life and Fisheries, he explained them as follows:

"Only twice before in twenty years have I seen this species, and although they seem large they are really small for that kind of shrimp. They are first cousins of the common river shrimp, the name of which is **Machrobrachium ohionis**, and is familiar to all Louisianians, and never attains a length of more than several inches.

"The name of this giant species is **Machrobrachium ohionis acanthurus**, and like the river shrimp it is a fresh water species. Its normal habitat is through central, north and South America in fresh water. It also occurs in abundance around the Island of Cuba. It is a remarkable fresh water shrimp, since specimens that I have received have measured, without their "whiskers", 17 inches in length. At that they were mere babies in size, since in its usual range this "giant river shrimp" (**acanthurus**) actually attains the weight of 3½ pounds each. A third species, **Machrobrachium ohionis jamaciense** is equal in size and chiefly differs from the giant shrimp presently discussed, in the details of the structure of the ends of its very long claws.

"This is the first time that I have known of the capture of so many individuals of this "giant river shrimp" in Louisiana, since this catch approximated 20 pounds. The important question that arises from this matter is that many people suggest that it would be worthwhile to import and plant these shrimp in Louisiana and thus form a new industry. There are no sound biological reasons indicating such an enterprise would be successful because this shrimp has occasionally occurred along the Gulf coast, and if conditions were favorable it would presumably have become established without artificial plantings.

"I do not known how these shrimp ever got here, but I do know that they virtually never would cross the Gulf because salt water would kill them."

Specimens of such large shrimp are of extreme interest since the third species indicated above has not yet been reported from Louisiana. The Department of Wild Life and Fisheries would appreciate the cooperation of anybody catching them, if they would ice or otherwise preserve the specimens, and send them in for identification.

———*Take a boy fishing*———

The main difference in the physical structure of the dog and the wolf is in the eye. The pupil of the dog's eye is round, that of the wolf is oblique.

NATURE GREAT . . .

(Continued from Page .)

oysters of larger size and better quality. The natural reefs of this area also produce a quality seed oyster. Seventeen to 20 miles from the mouth, in the moderate saline waters, there are prolific natural reefs. The individuals reach market size and are of good quality. There are no self-sustaining natural oyster communities in the high saline areas of the southern extrimity of the marsh. Large temporary productive reefs are formed, exploited, and finally depleted in this area beyond the controlling factors of Pearl River. In 1899 Dr. Moore, of the then U. S. Bureau of Fisheries, reported that the natural reefs between Martin and Sam Holmes Islands, which were formally productive, were completely depleted. In 1917 these identical reefs supported a most prolific population of market-sized oysters. The salinities of this area were reduced as a result of the opening of the Bonnet-Carre Spillway during the early summer of 1945. In 1947 and 1948 man completely exploited these reefs to such an extent that it was exceedingly difficult to catch a single oyster. The area has been barren until this summer, at which time a moderate strike has caught on the old shells. The reason for this latest natural rehabilitation lies in the reduced salinities caused by the 1950 opening of the Bonnet-Carre Spillway.

The second area of natural reefs of Louisiana are found in the salt-water marshes of the old Delta, formed when Bayou La Loutre and Bayou Terre aux Boeuf were the main passes of the river at its mouth. The present Mississippi River forms the western boundary. This region has been the backbone of the entire Louisiana oyster industry.

The sources of fresh water for this area are Oak River and the Mississippi River. The former is the principle artery for drainage of the upland, high marsh, and its effect is local, being dependent upon the local rainfall. The Bohemia Relief Outlet, a natural ommission of the Mississippi River Levee system, serves as the only means of fresh water available for the natural reefs of Black Bay, American Bay, California Bay and Quarantine Bay, plus the myraid smaller lakes and bayous of the region.

The natural reefs of the area show the identical pattern with respect to salinity as do those previously discussed. For example, the reefs closest to Oak River or the Bohemia Outlet are composed of oysters whose characteristics attest to their relatively fresh water environment. The salinity gradually increases as we progress from the inland bays to the open waters of the sounds. The larger indentations of the sounds, called bays, form the "mixing bowls" for the fresh and salt water with the result that different environmental conditions are produced that in turn have resulted in the production of a vast acreage of natural oyster reefs.

Historically, the natural reefs of this area have shown the extremes of flucuation with respect to salinity. The production of the area has followed this same curve. In 1897 the population was completely wiped out by a crevasse. Within a year's time however, the population of the reefs had reached a peak of magnitude greater than ever before, according to the "memory of man". In 1912, following a year of high water and flooded marshes, the crop was so dense that it was of no commercial value. In 1914 and 1918 the converse was reported. The influx of salt water had reduced the self-sustaining factor of the natural reefs and the production suffered a serious decline; in fact, the pessimistic predictions of those years stated that the natural reefs of the area would be completely lost for the growing industry of Louisiana. The predictions were malfounded, however, because the following years were years of abundant rainfall and high river which in turn was followed by high production.

The natural reefs of South Quarantine Bay were self-sustaining up until 1947. A controlled supply of fresh river water was available through the locks of the Mississippi River at Ostrica, Louisiana. These reefs were essentially seed reefs. The hurricane of 1947 destroyed these locks and cut off the supply of fresh water. By observations and measurements we have seen the changes that are occurring as a result. The oysters are now of larger market size but with very few juveniles in the population to replace the exploited adults. The natural enemies, especially the conch, were abundant in 1949. The oysters of these natural reefs ceased to be the dominant and controlling organism as the persistent high salinities invided the area.

There are a few natural reefs in the open waters of Breton Sound, the best known of which were the natural reefs of Hog Island which produced large market sized oysters. The history of these reefs has been found to be identical to those of the extreme southern reefs of the "Louisiana Marsh."

Generally speaking, it is of small wonder that Louisiana has remained near the top of the list of oyster producing states. Our natural reefs are so located that the periodic flucations of our tributary discharges are not felt on our natural reef industry as a whole. In years of flood, the proper mixture of fresh and salt water produces conditions for natural rehabilitation of our normally high salinity reefs, which balance the mortalities of the low salinity reefs near the fresh water outlets. Naturally, the bulk of production is derived from those reefs which are located, shall we say, midway between the open salt water and the rivers. It is these natural reefs that year in and year out produce in twelve months a quality seed oyster that is truly the backbone of the industry. It is these natural reefs that turn our thoughts to conservation practices in order to insure the maintenance of high production.

The natural reefs of Terrebonne Parish are located east of Atchafalaya Bay to Bayou Petit Caillou. The Atchafalaya River forms the controlling factor for the natural reefs of this drainage area. Unlike the natural reef areas of the East, the conditions produced by the Atchafalaya are more constant, that is, the population of the natural reefs have not and do not flucuate as frequently. Atchafalaya Bay serves as a vast reservoir of fresh water which gradually dissipates eastward. Ecologically, the natural reefs of this drainage area produce oysters that show characteristics of their location with respect to their nearness to the Bay.

The reefs of Four League Bay produce oysters of poor quality and are subjected to periodic fresh water "kills".

Sister Lake forms a vast mixing bowl for the salt water of the Gulf and the Atchafalaya River water that results in the optimum environmental conditions for the production of natural oyster communities. This lake is approximately 11.5 square miles, but in six months of 1949 it produced more oysters than the entire states of Mississippi, Georgia and South Carolina, respectively. The oysters are excellent for canning and for seed, but the rapid growth of the spat prohibits the formation of a quality raw market oyster. Other bays in the immediate area of Sister Lake the literally full of natural reefs oysters. The problem of this area is one of "too much" rather than "too little".

The prolific oyster strike results in excessive clustering, which produces an uneconomical product. The natural reefs to the east of Sister Lake are located in progressively higher saline waters. The natural enemies, which are virtually non-existent in Sister Lake, begin to be found in numbers proportionate to the distance from the available fresh water. In other words, the natural oyster communities of this area follow the same pattern, but over a larger acreage and without as many local sub-conditions, as is found on the eastern reefs.

In conclusion, we clearly see that our natural reefs of Louisiana are ecologically controlled by the tributaries drainage into ourt salt water marshes. Along the northern fringes of the entire coastal marshes, especially in the inaccessible cuts and bayous, are found small natural reefs of wild, uneconomical oysters. These in part form the brood stock for the large natural reefs, of the accessible bays. The local rainfall produces the only available fresh water in the majority of cases.

Our main tributaries, the Mississippi and the Atchafalaya Rivers, are of major importance for the present and future plans of flood control of the upper valley. The productivity of the vast and wealthy natural resources of the salt water marshes are directly dependent upon the periodic flooding of the marshes by theses rivers.

William Werlla, of the department of Wild Life and Fisheries, with the 43-pound wahoo, he captured on July 3rd off Grand Isle, the first fish of its kind ever caught in Louisiana coastal waters. Greatly similar to the king mackerel in appearance, this wahoo proved a much stouter fighter than the big kings, which are so prevalent in those waters.

WASTED WILDLIFE

TURN BACK THE HISTORY of wildlife in America to the period of 1850 to 1900 and you will find many examples of wasted wildlife, for it was within these years that man slaughtered, wasted and misused the populations of wild mammals, fish and birds and brought about the lowest ebb in the numbers of wildlife this country has ever known. During these years the market hunter and pothunter plied their trade. The feather business for the millinery trade was in full swing and the vogue for collecting bird eggs was at its peal. This was the period before adequate game laws and restrictions. The idea of conservation had not yet been born!

Why was out wildlife wasted so thoughtlessly during this time in our history? Several things contribute to the picture. The fowling piece of the early pioneer had been replaced by the more efficient rifles and improved ammunition of the day. This was also the time in our history when vast areas of wilderness were being opened up by land and timber grants. Railroads pushing westward brought the evils as well as the benefits of civilization to the frontier. America appeared to be a land of plenty and things were to be had for the taking. Who in 1850 thought about conserving timber or rangeland? Who living in those times thought that the buffado, antelope and elk roaming the western ranges would ever be reduced to the danger of extinction? No one living in those times foresaw the need for conservation of anything, or that the spread of civilization could drive wild game from an area by axe, fire and plow.

The American buffalo or bison that once roamed the vast grasslands from Virginia to the Rockies represent our first shameful deed to wildlife during this period. Once estimated at seventy-five millions, the buffalo drifted north and south with the seasons. In 1869 the main buffalo herd was divided into separate herds by the completion of the Union Pacific Railroad. In May 1871, Colonel R. I. Dodge of the Army, saw an unbroken herd of buffalo stretching along the Arkansas River for twenty-five miles. This was the southern herd, estimated at 500,000 animals. The northern herd contained about 1,500,000 buffalo. With the building of the railroads came the need to feed the crew members. Therefore each railroad hired professional buffalo hunters to kill a certain number of animals each day. Buffalo Bill Cody, hired as a buffalo hunter for the Kansas Pacific Railroad, killed 4,280 buffalo in the early 1870's. As the railroads progressed westward the hide hunters attacked the herds of buffalo. Hundreds of animals were killed for their tongues, which were considered a deicacy. An idea of the work of these hide hunters is evident when in 1872-73 the Atcheson, Topeka and Santa Fe and the Union Pacific Railroads shipped 1,250,000 buffalo hides to eastern markets. In Wichita, Kansas, at that time buffalo steaks sold for two cents a pound. The southern herd was attacked by hide hunters in the fall of 1871, and by 1875 that herd was all but wiped out. With the completion of the Northern Pacific Railroad in 1880 the grand attack on the northern herd of buffalo began. By 1883 all but 900 of this herd had been exterminated. Today the total of American buffalo living in the world, in parks, reservations and zoos, number about 5,000.

Gone are the days when the passenger pigeon clouded the sky by the millions. This bird, resembling our mourning dove, was wiped off the face of the earth in about fifty years. Hunted by guns, dynamite, fire, nets and clubs this bird could not live with civilization. These birds were once so plentiful in the middle western states that factories were set up for the canning of them; at these factories the pigeons were smoked, salted and pickled for eastern markets. For example, in 1869 the town of Hartford, Michigan, shipped three carloads of dead pigeons each day for forty days to eastern cities making a total of 11,880,000 birds. Another town shipped over 15,840,000 passenger pigeons to market in one year. These birds were so numerous that their numbers were never known. One flock was observed in flight that measured one mile in width and 240 miles in length—the total estimated at 240 million pigeons. In 1914, the last passenger pigeon known to exist died in a zoo cage.

The wasteful chapter continues, as historical records show that some market hunters killed over 500 bucks in a single day. Hunters killed as high as 160 squirrels per day. Antelope were so common that the early westerner shot them as carelessly as a modern hunter shoots a rabbit. Ruffed grouse were shipped to eastern markets by the thousands, where they were sold as low as twelve and one-half cents each. Ducks, rabbits, wild turkey and venson and even songbirds were placed on the market.

It was very common in the late 1880's for cheap whiskey to be shipped in the logging camps of the northern states and traded for venison. Hired hunters killed and sold deer at $3 a head to large hotels and restaurants. In most large cities venison sold as low as ten cents a pound.

Nor was the market hunter the only waster of game. We cannot forget the plume or feather hunters that killed not for meat, but for the feathers of the birds. It is hard to believe that songbirds as well as flamingoes, egrets, scarlet ibis, bird of paradise, and many other birds were sought out and killed for their colorful plumes. Records show that in the early 1900's at the regular London feather auction, 1,600 hummingbird skins sold at two cents each, and 22,810 kingfisher skins were offered to the highest bidder.

The most startling of all historical records of this shameful period is a court record of 1903. The State of New York tried two men to enforce payment of fines amounting to $1,168,315 for illegally having in their possession in a cold-storage warehouse the following game and non-game birds: 7,560 grouse; 4,385 quail; 1,756 ducks; 288 bobolinks; 96 woodcock; 8,058 snow buntings; 7,607 sandpipers, 5,218 plovers; 7,003 snipes; 788 yellow legs. By way of explanation, at the turn of the century in New York City a half dozen species of songbirds were served in hotels and restaurants under the menu name of "reed-bird."

Also in this period are the records of terrible slaughter of waterfowl. Market hunters operated in the big marshes along the Atlantic coast, the Gulf coast and in the big marshes of Utah. The methods of slaughter used in obtaining the birds varied with the hunter. Punt guns, guns of large caliber loaded with scatter-shot, when discharged would kill entire flocks of rafting ducks. Powerboats, sailboats, baited blinds, nets and long barreled rifles requiring two men for operation were also employed. Records for a day's kill made by a market hunter were seldom published; however, one record occurring in 1906 reported two men armed with automatic shotguns killing 450 geese in a single day.

Reports of shooting contests are to be found in old records. One account of a "squirrel hunt in Bartholemew County, Indiana," in 1834 reveals a rivalry between Sand Creek and Wayne Townships as to which had the best squirrel hunters. "Finally it was agreed that each township would select 50 men to compete in a three-day squirrel hunt to be terminated by a great barbecue for which the losing side was to pay. The total number of squirrels killed by the winning team is not known, but the individual championship went to a man for killing 900 squirrels in three days. The runner-up killed 783."

Virginia had her share of mighty hunters. It just takes time to uncover the records of their deeds, for such things are hidden in old newspapers, books and diaries. In the Rockingham (county) Register of November 29, 1877, is the following article about the late James Todd of Rockingham County: "He was the most remarkable hunter in the valley of Virginia, having killed over 2,700 deer up to 1860 with one muzzle loading rifle—he had killed bear without number." Records show that a Mr. Rexrode of Highland County killed 207 turkeys, 111 deer in his lifetime, mostly for the market, and sold hundreds of grouse at fifty cents each. Abner H. Smith of Ogles Creek, Allegheny County was another Virginia hunter of great ability. Mr. Smith kept records of his hunting trips from 1885 until his death. He had killed 220 deer and over 60 bear in thirty-six years, which still remains as somewhat of a record in the mountains of Virginia.

Slowly, restrictions were put into effect that ended this period of man's wasteful war on wild game. Market hunting was first tabooed by the State of Arkansas in 1875 and later became nationwide. The first bag limit appeared in Iowa in 1878. The first warden system started in Massachusetts and New Hampshire in 1850. Punt guns and other illegal weapons used for shooting in rafts of waterfowl were outlawed in 1865. Shooting waterfowl from power-boats, sailboats, was outlawed in 1897. Federal supervision of interstate shipments of game began in 1900 with the Lacey Act.

As the twentieth century began the conservation movement was gaining momentum. The administration of Theodore Roosevelt brought conservation to the public in his idea of "conservation of natural resources through wise use." Thus the shameful, wasteful years in the history of wildlife in this country came to an end.

—Virginia Wildlife.

———*Take a boy fishing*———

GAME PRESERVE . . .

(Continued from Page 10)

peas, along with soy beans, and corn patches, in which both the deer and the turkeys revel.

For mast there is pine, hardwood, cypress, Tupelo gum, and the beech bay ridges, all of which is excellent for deer, turkeys and squirrels. This Fall there will be a planting of receding crimson clover in several of the food plots, and as long as this clover lasts, and it should last indefinitely, it will be hard to drive the deer and turkeys away.

So you see, this establishment of a game preserve means not only a restocking in a certain area, but becomes a constant maintenance obligation if it is to become a success. For this maintenance and protection it is necessary to have jeeps, tractors, plows and other machinery. It is imperative that proper foods be planted, if they are not put there by nature, and a variety be provided for both summer and winter to insure healthy and sturdy game animals and fowls.

"It is amazing," Mr. Smith says, "how quickly all game adapts itself to preserve advantages, develops feeding and wandering habits in harmony with refuge possibilities, and loses its fear of such unnatural sounds as that of a jeep motor, a tractor or the explosions of an outboard motor, but remains forever wary of dogs, men and other predators that are their natural enemies."

For natural beauty there are few spots in Louisiana that can surpass the 11,000 acres of the Livingston preserve. There are few places in the entire state that can offer better fishing for bass, sac-a-lait and goggle-eye perch. Just imagine what it will be like when it has reached its maximum population of deer, wild turkeys, quail, squirrels and rabbits. And imagine what a hunter's paradise will be found in the woods and fields surrounding that refuge when the game and wild fowl population begins to overflow.

———*Take a boy fishing*———

WHITE IBIS . . .

(Continued from Page 16)

populations have been reduced through the operation of this or other factors, there is a consequent parallel need for the greater protection of the crayfish that remain.

The writer must again emphasize that although it may at first seem peculiar that a conservationist should believe reduction of such a bird population a measure to be recommended, nevertheless all of these factors must be cautiously considered and carefully balanced before any blanket decision or recommendation is made.

There for the moment must rest the matter. It would be of greatest interest to the writer to receive from any of the readers of the Louisiana Conservationist, whose personal observation or personal interests have been concerned with the crayfish-White Ibis matter, any of their contributions to the understanding of this quite complicated biological problem.

———*Take a boy fishing*———

MENAGE OR MENAGERIE . . .

(Continued from Page 18)

the street and in his arms were some kittens. THE kittens!

"Guess where I found your cats, lady!" he said proudly. "Out to my uncle's dairy!"

Instead of the expected reward he got an insincere "Thank you" and a door slammed rather rudely behind him.

We both fell in love with an otter and tried all means fair and foul, to get it for our own. This sinuous, dusky brown creature captivated us, but the owner steadfastly refused to part with his excuse for fishing.

The climax to this tale came when my hospitable husband brought home an alligator. Now I had been asking for an alligator ever since I came to live in the South, but I never actually thought I would get one!

It was just a baby alligator, barely two feet long, but it was a vicious woman-eater, never failing to bite the shaking hand that tried to feed it. I kept it in a strong box, securely wired and nailed and tied, and kept it in the farthest corner of the kitchen. Everytime I walked past that box the alligator would snap and whip his tail. He consistently refused all my efforts to feed him, plainly indicating that he had no appetite except for human flesh, namely MINE. "But for the whim of that woman," he seemed to snarl as he snapped

Vernon parish bobcat hunters, left to right, Hedgeman Langton, W. L. Campbell and Harrison Langton, all of Leesville, with bobcats they have captured and some of their cat hounds.

and whipped his tail, "I'd be back in the bayou where I belong!"

I lived in a state of apprehension, gave up my habit of going barefooted, started peering under beds and into dark corners, and considered sleeping with the baby in the security of his encolsed screened bed. I was worried about the aligator when I was awake, and even when I slept I had alligator-filled night-mares. Home hadn't been Home Sweet Home since the alligator came to stay.

One brave day I resolved to put an end to this alligator business. I called in my friend Callie, who isn't afraid of alligators or anything, and with her help and encouragement, finally got the alligator crated for shipment. Then I transported the snapping, lashing crate to the express office, overrulled the agent's objections with my determination, and had the alligator shipped to Oklahoma. When the box arrived there, I lost a very close friend.

The departure of the awful alligtor created a changed household. The baby slept, and the other pets quieted down, and for the first time in many months I had time to think. This would take some careful planning. With my husband you don't just put a firm foot down and protest "I've had all I can stand! Either the pets go or I will!" for he might casually wave me goodby! No I'd have to try a different technique.

Should I try tears? Invite the in-laws in? Move to a smaller house? I decided to adopt a secret policy—an exlusion act—a segregation of the species—but I realized that I would have to find something to take the place of the pets.

Come see us now and you will find that our dogs are in their dog yard, the chickens are in their pen, and the goldfish are in their bowl.

"And what about the house?" you inquire.

Why the house has been getting fuller of little Perkinses every year!

Some pessimist might point out that my subtle strategy has failed for practically every corner of the house contains a cage of the children's moths and butterflies, a jar of lizards, a box of beetles and non-biting bugs, or a bottle of frogs, but with the indulgent eyes of a mother I just overlook all this and, pausing to remove a stray pet slug from the sofa, I shrug it off with, "Prenatal influence, you know."

Others might inquire as to the frustating effect such suppression might have on the wildlife-loving husband. Shed no tears. His job now is managing a 40,000 acre preserve full of deer and turkey and quail and squirrels and dove.

Take it from me—folks is folks and fauna is fauna, and never the twain should meet!

STATE BIOLOGIST TO PRESIDE AT MEETING

James Nelson Gowanloch, Chief Biologist of the Department of Wild Life and and Fisheries will preside as president at the annual meeting of the National Shellfisheries association to be held in Atlantic City, August 21 through 24.

The National Shellfisheries Association is the most important scientific body in the United States concerned with scientific research covering all shellfisheries of the country. Scientific leaders in this field from all parts of the country will present a comprehensive program of research reports. The meeting is held in conjunction with two other important institutions: The Oyster institute of North America of which James N. McConnell, director of the Oyster and Water Bottoms division, of the Department of Wild Life and Fisheries, is a director, and the Oyster Growers and Dealers Association of North America. This is the first time that the presidency of the National Shellfisheries Association has ever been held by any one from the deep south.

———*Take a boy fishing*———

Otters, when hunting for fish, always swim up stream. This is because fish, when waiting for food or reposing, have their heads up the water. The otter can more easily approach them from behind.

The jackal is called the "lion's provider." When on the trail of his prey, his hideous calls disclose his whereabouts to the lion, who follows in his wake and drives him away from the carcass when the kill is made, leaving him only the fragments when his own hunger is satisfied.

When a female mole is caught in a trap, the male's sorrow at losing his mate is often so great that he starves to death.

The common garden snail has 14,175 teeth. These are located on the snail's tongue, in 135 rows, each row [illegible] 105 teeth.

The eggs of the toucan, a South American bird, are so shiny [illegible] often use them as mirrors.

Forest and wood fires annually destroy enough timber to [illegible] 1,700,000 tons of newsprint.

Northern Pike devour [illegible] wild ducks annually. [illegible] 9,000,000 ducks [illegible]

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"WELL, WHERE DO WE GO FROM HERE?"

Old Bobwhite was feeling mighty, mighty low as he approached a friend of long standing, ***Butch Bunny.***

"Farmer Brown's woods back on th' lower 40 just burned," he moaned. "Fire took that strip of lespedeza and all th' underbrush on th' crick bank, too. I'd been livin' there since he cleaned out th' last fence row in th' Spring."

"You think you've got troubles?" Butch scoffed. "Our family's goin' to increase again soon and with all those dogs runnin' loose, blamed if Farmer Brown didn't up and set fire to every blessed brush pile on th' place. If'n there wuz a den tree here-abouts I believe I'd turn squirrel."

"Heard Farmer Jones over there a piece has a boy in th' Junior Wildlife Club and he's planted all sorts of stuff," Old Bob indicated with a flap of his wing. "I'm goin' over there and see if there's anything I can use. Nowhere else to go.. You all comin'?"

Butch sadly wagged his head. "Guess so. See you there if'n we get 'cross that highway without being run over."

—Courtesy Tennessee Wildlife